Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	1	23

INDEX OF SHEETS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL CROSS SECTIONS
3-6	CONSTRUCTION DETAILS
7,8	CONSTRUCTION AREA SIGNS
9	DETOUR PLAN
10,11	PAVEMENT DELINEATION DETAILS AND QUANTITIES
12,13	SUMMARY OF QUANTITIES
14-16	TRAFFIC MONITORING STATION
17-23	REVISED STANDARD PLANS

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

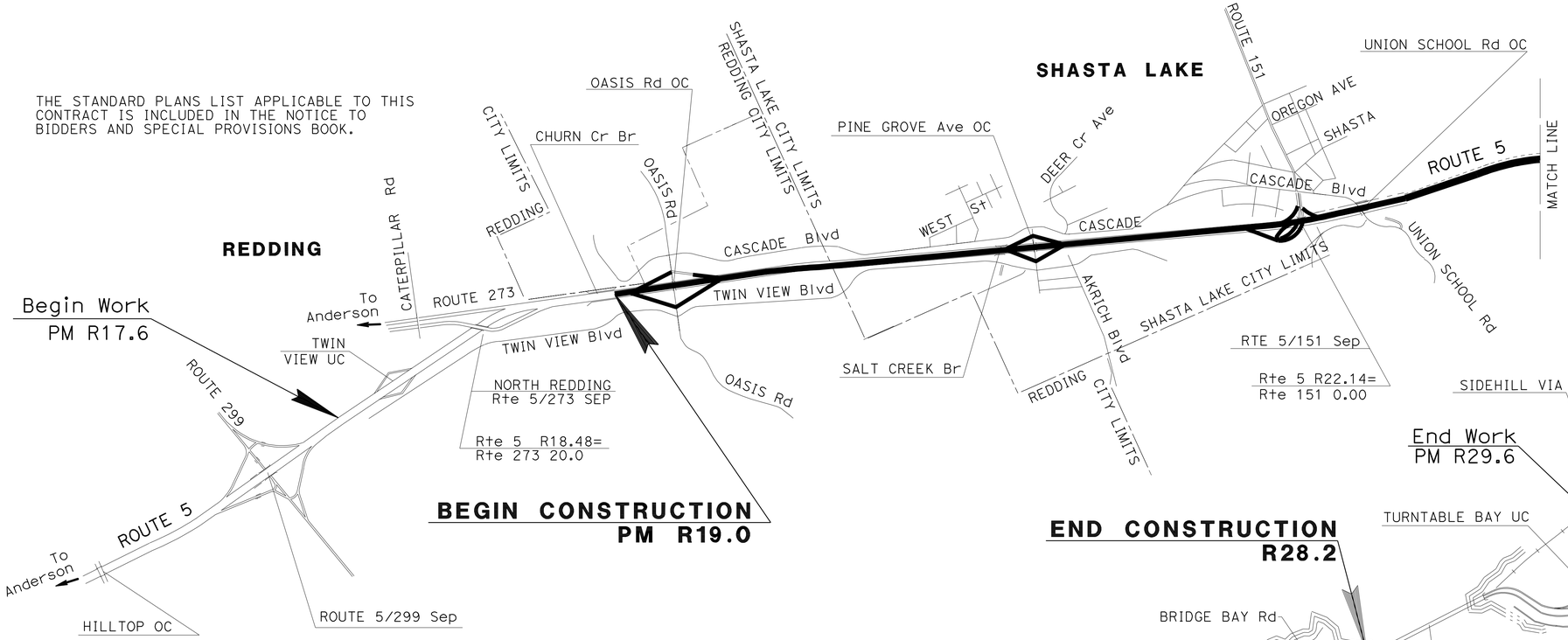
STATE HIGHWAY

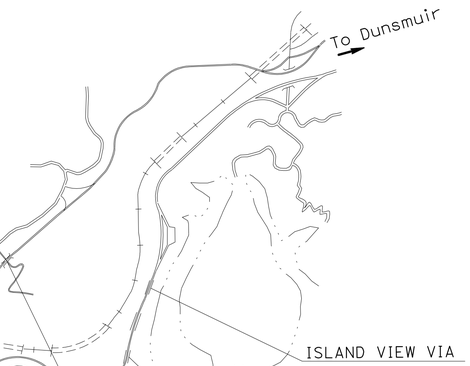
IN SHASTA COUNTY IN AND NEAR REDDING AND SHASTA LAKE FROM CHURN CREEK BRIDGE TO 0.6 MILE NORTH OF BRIDGE BAY OVERCROSSING

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

LOCATION MAP





NO SCALE

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

PROJECT MANAGER: LANCE BROWN

DESIGN ENGINEER: LANCE BROWN

P:\proj2\02\2E650_plans\pse\22E650ab001.dgn

01-11-11
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

January 11, 2011
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CONTRACT No.	02-2E6504
PROJECT ID	0200000591

LAST REVISION 01-11-11 DATE PLOTTED => 11-JAN-2011 TIME PLOTTED => 13:18

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	2	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

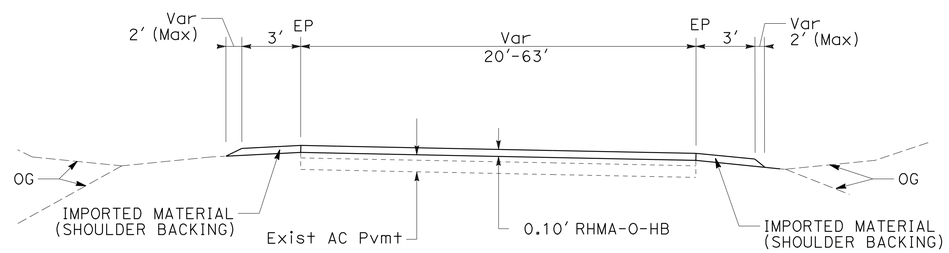
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

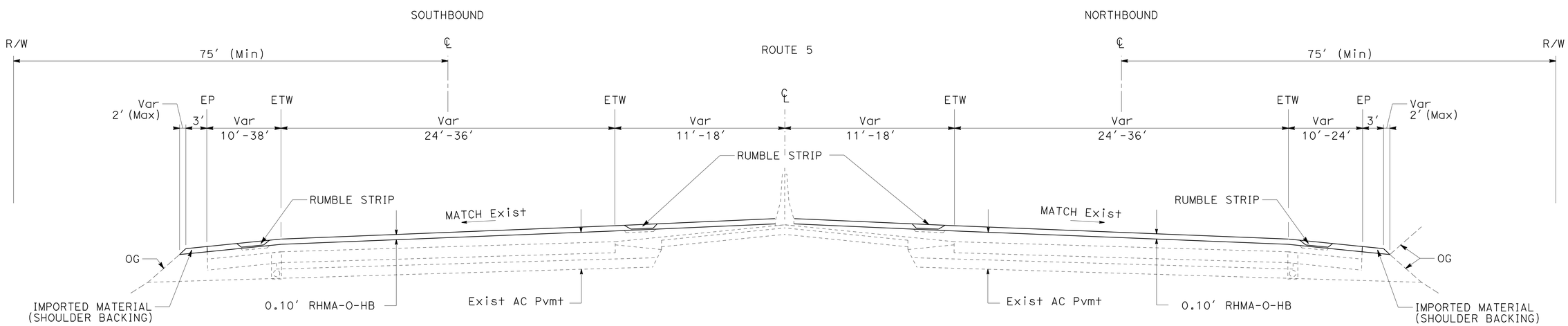
1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
2. SUPERELEVATIONS AS SHOWN OR AS DETERMINED BY THE ENGINEER.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.
4. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

ABBREVIATIONS:

RHMA-O-HB	RUBBERIZED HOT MIX ASPHALT (OPEN GRADED HIGH BINDER)
WIM	WEIGH-IN-MOTION



OASIS Rd, PINE GROVE Rd, Rte 151 Jct, MOUNTAIN GATE, FAWNDALE Rd, AND BRIDGE BAY Rd RAMPS



TYPICAL CROSS SECTION

TYPICAL CROSS SECTIONS

NO SCALE

X-1

REVISED BY | DATE REVISED
MICHAEL CONNER | KARLIE SMITH
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: LANCE BROWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	3	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. THE 0.10′ DEPTH COLD PLANE AC PAVEMENT SHALL BE A MINIMUM OF 66′ IN LENGTH MEASURED ALONG THE ETW.
2. SEE TYPICAL CROSS SECTIONS FOR EXISTING STRUCTURAL SECTION.
3. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.

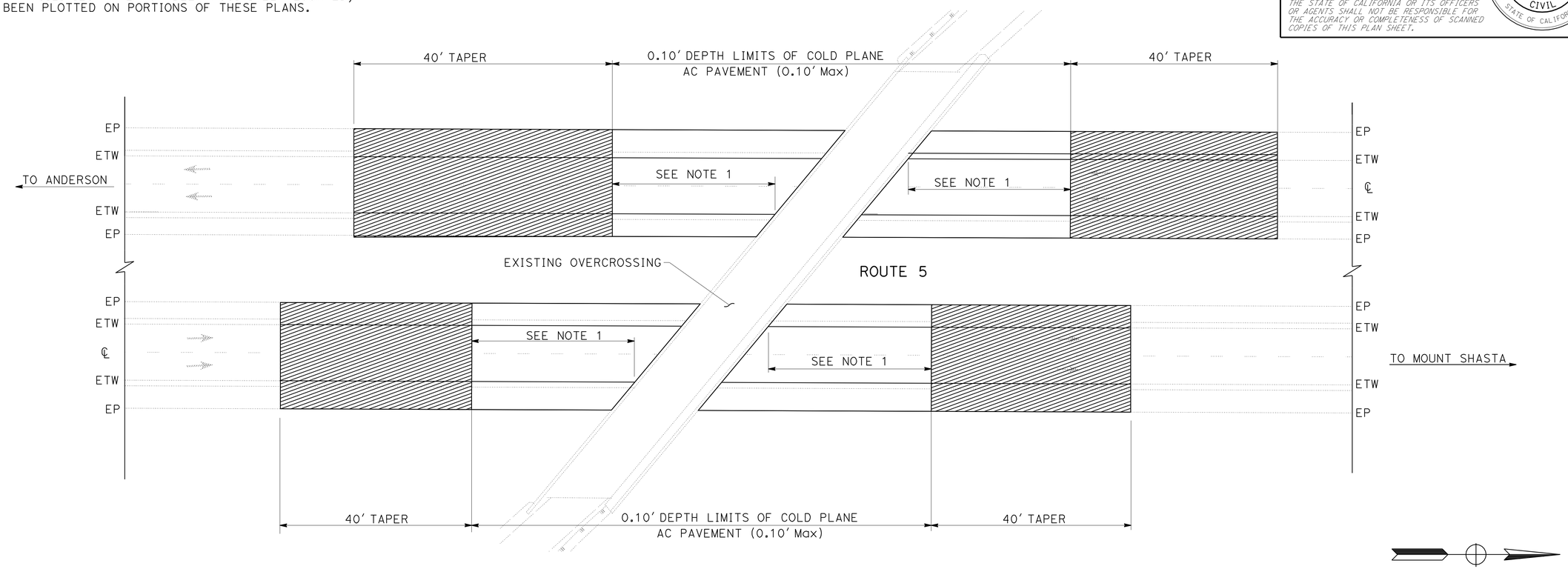
LEGEND:

COLD PLANE AC SURFACING (0.00′ TO 0.10′)

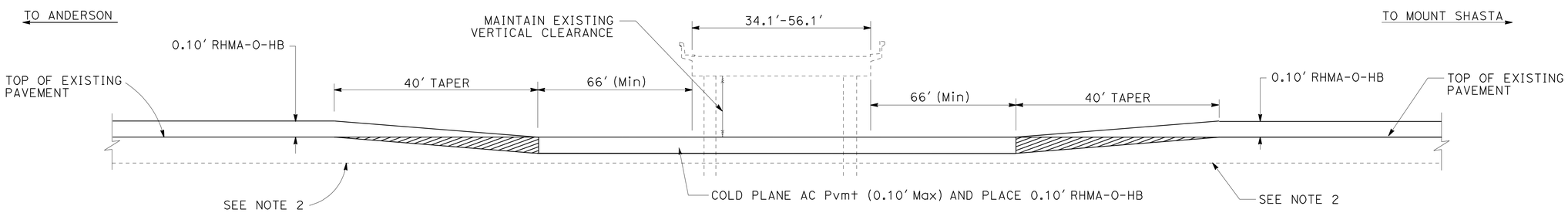
DIRECTION OF TRAVEL

ABBREVIATIONS:

RHMA-O-HB RUBBERIZED HOT MIX ASPHALT (OPEN GRADED HIGH BINDER)



PLAN



ELEVATION

OVERCROSSING PAVEMENT OVERLAY TAPER

PM R19.40 NB & SB
R21.00 NB & SB
R22.14 NB & SB
R22.41 NB & SB
R24.08 NB & SB
R26.04 NB & SB
R27.63 NB & SB

CONSTRUCTION DETAILS

NO SCALE **C-1**

REVISED BY	DATE REVISED
MICHAEL CONNER	KARLIE SMITH
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	LANCE BROWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	4	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

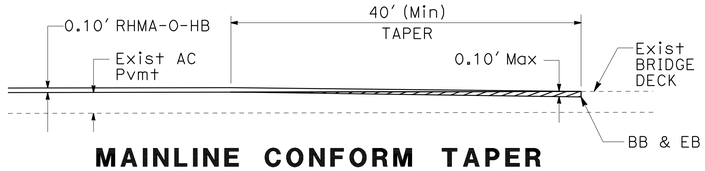
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.
2. NO EXISTING UTILITY FACILITIES HAVE BEEN IDENTIFIED WITHIN THE WORK AREA DELINEATED ON THIS PLAN SHEET.

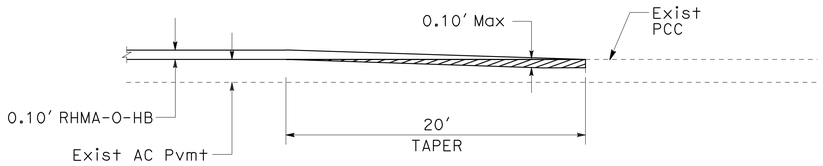
ABBREVIATIONS:

WIM WEIGH-IN-MOTION



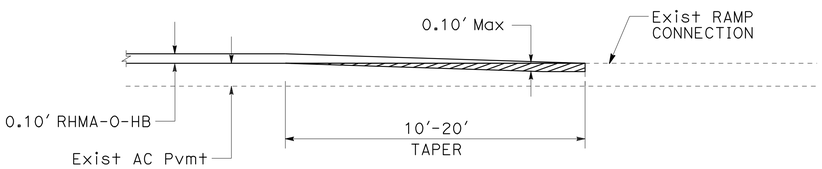
MAINLINE CONFORM TAPER

PM R19.02 NB & SB
R28.15 NB & SB



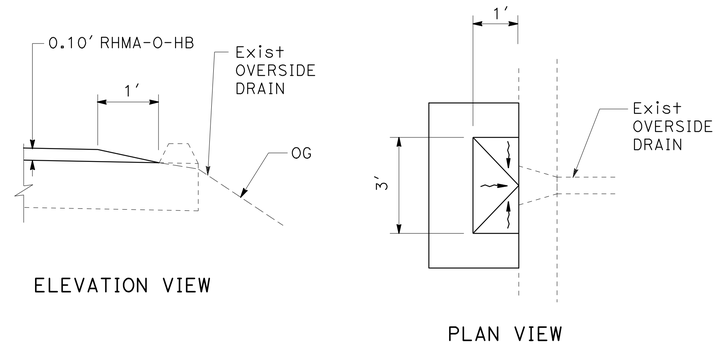
RAMP TAPER WITH PCC

PINE GROVE Ave NB EXIT
PINE GROVE Ave SB EXIT

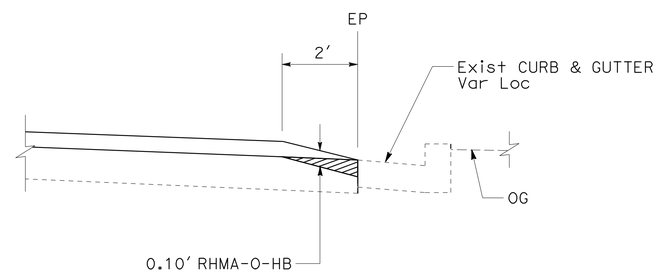


RAMP TAPER

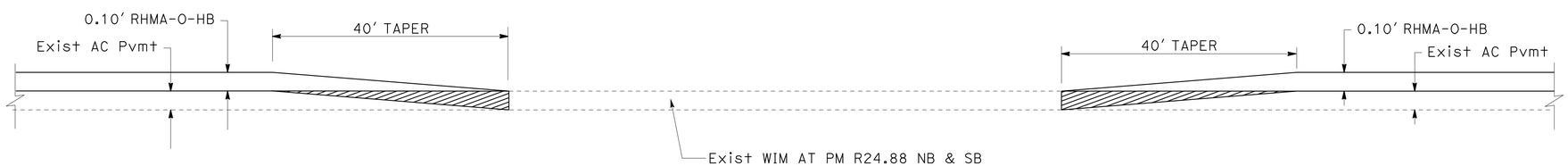
OASIS Rd
PINE GROVE Ave NB ENTRANCE
PINE GROVE Ave SB ENTRANCE
Rte 151 Jct
MOUNTAIN GATE
FAWNDALE Rd
BRIDGE BAY Rd



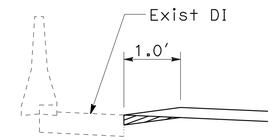
TYPICAL OVERSIDE DRAIN CONFORM



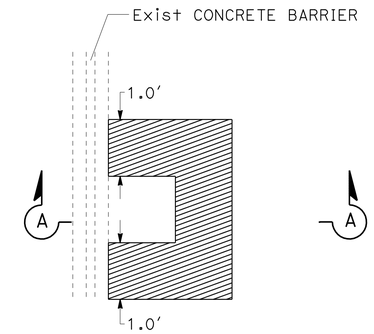
CONFORM TAPER ALONG EXISTING CURB AND GUTTER ON RAMPS



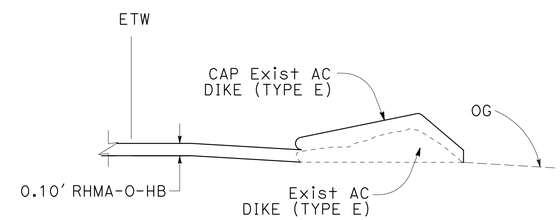
TAPER AT WIM



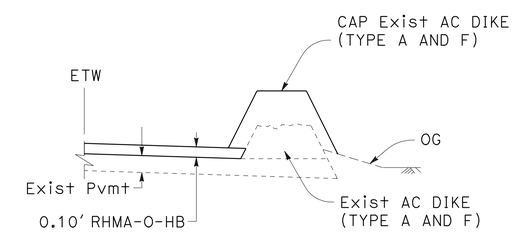
SECTION A-A



MEDIAN INLET COLD PLANING DETAIL



TYPE E



TYPE A AND F

TYPICAL CAP EXISTING ASPHALT CONCRETE DIKE

CONSTRUCTION DETAILS

NO SCALE **C-2**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

FUNCTIONAL SUPERVISOR: LANCE BROWN
CALCULATED-DESIGNED BY: MICHAEL CONNER
CHECKED BY: KARLIE SMITH
REVISED BY / DATE REVISED

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LAST REVISION 01-11-11 | DATE PLOTTED => 11-JAN-2011 | TIME PLOTTED => 13:19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	5	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

1. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.

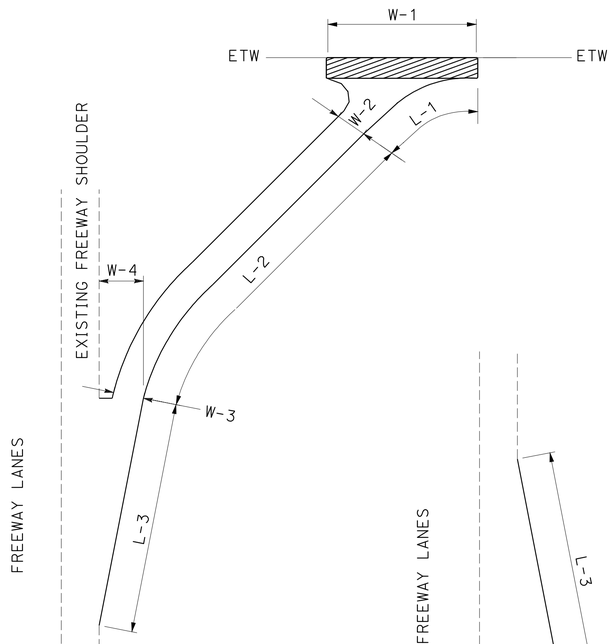
LEGEND:

COLD PLANE AC SURFACING (0.00' TO 0.10')

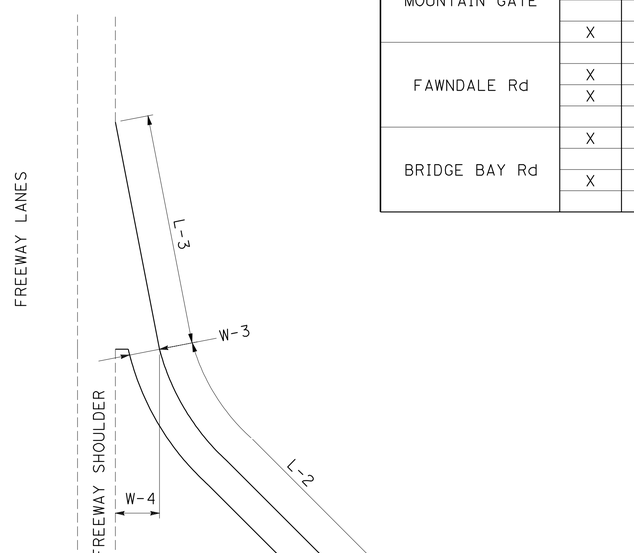
RAMPS

OVERCROSSING	DIRECTION OF TRAVEL		ENTRANCE RAMP	EXIT RAMP	POST MILE	DIMENSIONS						
						WIDTH IN FEET				LENGTH IN FEET		
	NB	SB				W-1	W-2	W-3	W-4	L-1	L-2	L-3
OASIS Rd		X	X		R19.25		33	24	36		740	1040
	X			X	R19.26		33	22	34		750	380
	X		X		R19.53		25	24	45		480	1040
		X		X	R19.67		23	22	35		280	416
PINE GROVE Ave		X	X		R20.86	45	31	24	24	45	645	945
	X			X	R20.87		22	24	38		302	465
	X		X		R21.09	93	24	24	34	90	330	958
		X		X	R21.12		23	23	37		320	400
Rte 151 Jct	X			X	R21.85	*	*	*	*	*	*	*
	X		X		R22.02	*	*	*	*	*	*	*
		X	X		R22.03	*	*	*	*	*	*	*
		X		X	R22.34	*	*	*	*	*	*	*
MOUNTAIN GATE	X			X	R23.91		23	23	37		862	452
		X	X		R23.92	125	23	22	36	125	602	1165
		X		X	R24.24	105	24	23	36	70	772	397
	X		X		R24.26	125	23	23	32	110	768	1165
FAWNDALE Rd		X	X		R25.82	139	25	25	32	90	1020	1195
	X			X	R25.86	135	33	23	36	91	855	422
	X		X		R26.22	105	23	23	33	88	775	585
		X		X	R26.23	130	28	23	37	72	1130	436
BRIDGE BAY Rd	X			X	R27.46	*	*	*	*	*	*	*
		X	X		R27.60	*	*	*	*	*	*	*
	X		X		R27.62	*	*	*	*	*	*	*
		X		X	R27.27	*	*	*	*	*	*	*

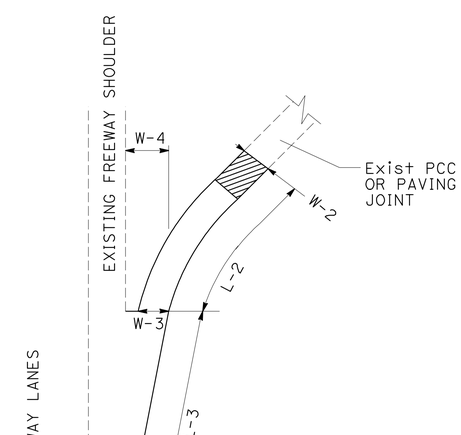
* SEE DETAIL ON C-4 FOR DIMENSIONS



TYPICAL EXIT-RAMP



TYPICAL ENTRANCE-RAMP



OASIS Rd RAMPS AND PINE GROVE Ave NB & SB EXIT RAMPS

CONSTRUCTION DETAILS

NO SCALE

C-3

REVISED BY | DATE REVISED
MICHAEL CONNER | KARLIE SMITH
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: LANCE BROWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	6	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

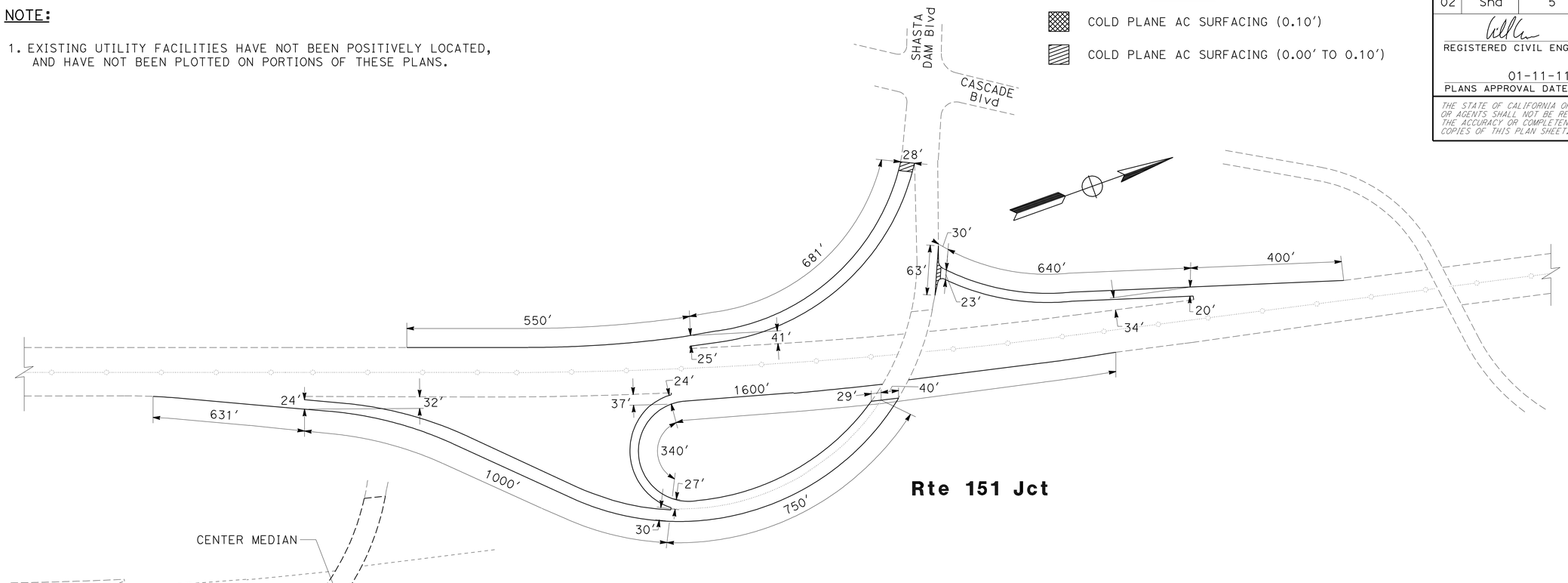
NOTE:

1. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.

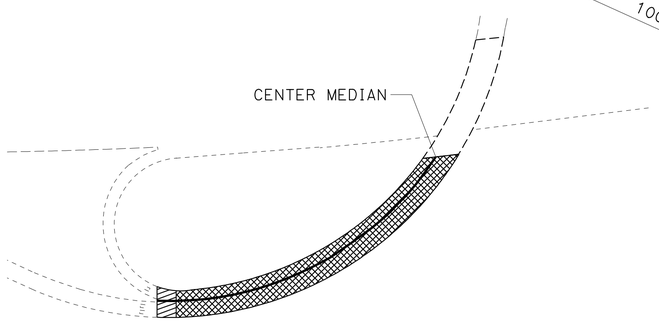
LEGEND:

COLD PLANE AC SURFACING (0.10')

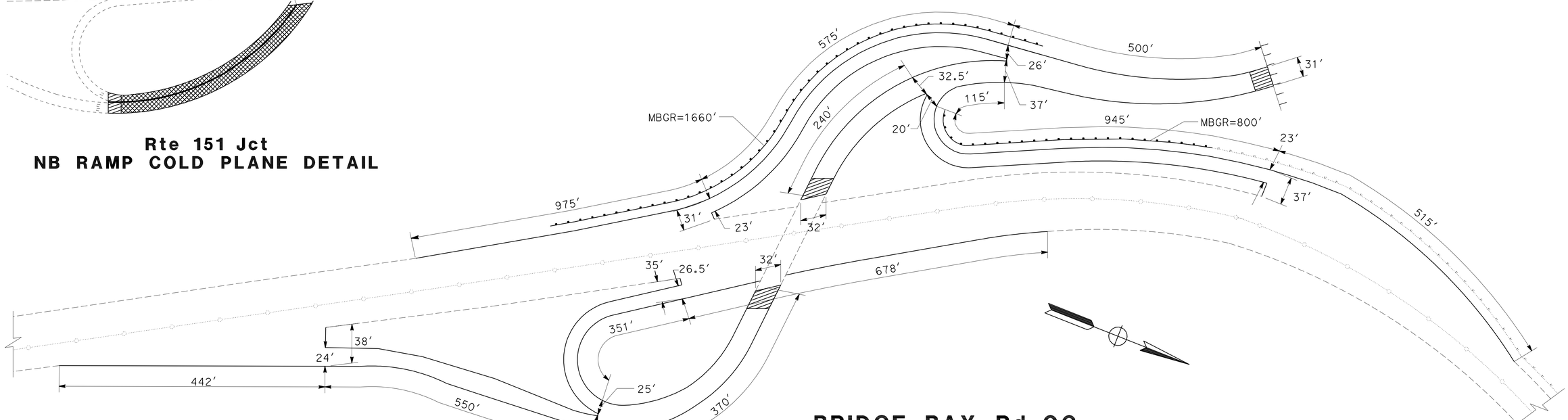
COLD PLANE AC SURFACING (0.00' TO 0.10')



Rte 151 Jct



Rte 151 Jct
NB RAMP COLD PLANE DETAIL



BRIDGE BAY Rd OC

CONSTRUCTION DETAILS

NO SCALE C-4

REVISED BY | DATE REVISED

MICHAEL CONNER | KARLIE SMITH

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: LANCE BROWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® MAINTENANCE

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	7	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. EXACT LOCATION OF ALL SIGNS TO BE DETERMINED BY THE ENGINEER.
2. ALL SIGNS SHALL BE BLACK ON ORANGE EXCEPT C40 (CA), WHICH IS BLACK ON WHITE.
3. CALIFORNIA CODES ARE DESIGNATED BY (CA), OTHERWISE FEDERAL CODES ARE SHOWN.
4. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.
5. INTERMEDIATE G20-1 SIGNS SHOULD BE PLACED EVERY 3-5 MILES AS NECESSARY.

LEGEND:

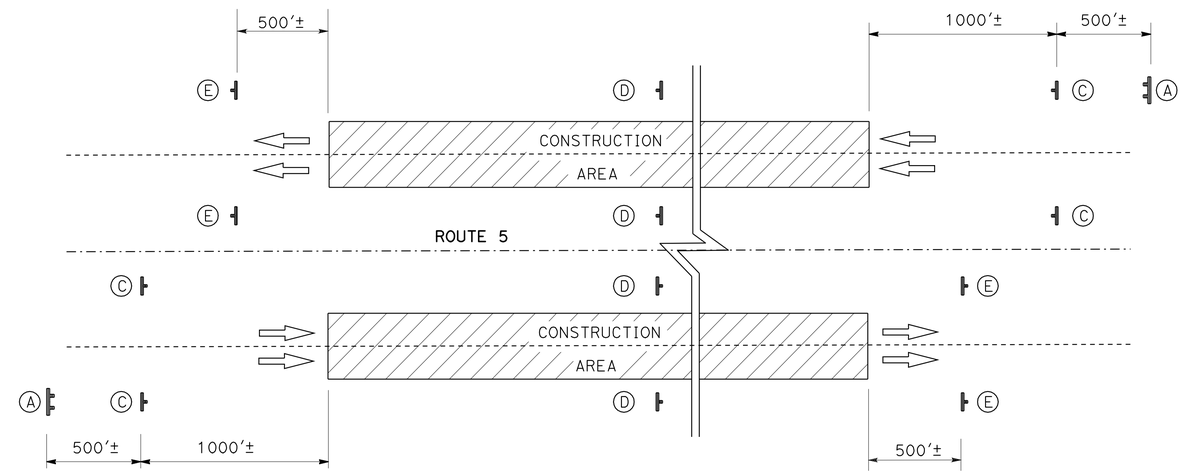
- ONE POST STATIONARY MOUNTED SIGN
- TWO POST STATIONARY MOUNTED SIGN
- DIRECTION OF TRAVEL
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- TRAFFIC CONE
- PORTABLE SIGN

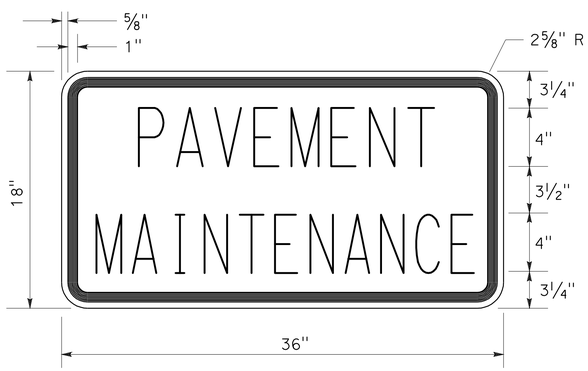
ABBREVIATIONS:

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

CONSTRUCTION AREA SIGNS (STATIONARY MOUNTED)

○	TYPE	PANEL SIZE (INCHES)	SIGN MESSAGE	No. OF POSTS AND SIZE	No. OF SIGNS
Ⓐ	C40(CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2- 4" x 6"	14
Ⓑ	W20-1 C23B(CA)	48" x 48" 36" x 18"	ROAD WORK AHEAD PAVEMENT MAINTENANCE	1- 4" x 6"	12
Ⓒ	G20-1 C23B(CA)	36" x 18" 36" x 18"	ROAD WORK NEXT XX MILES PAVEMENT MAINTENANCE	1- 4" x 6"	4
Ⓓ	G20-1	36" x 18"	ROAD WORK NEXT XX MILES	1- 4" x 4"	4
Ⓔ	G20-2	36" x 18"	END ROAD WORK	1- 4" x 4"	16

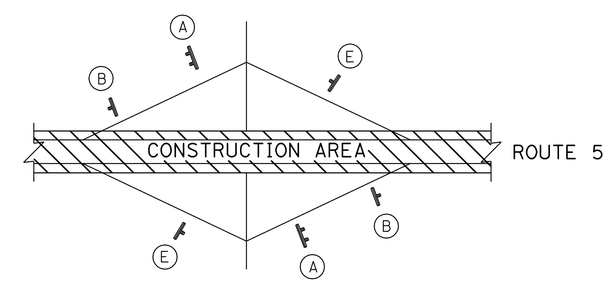




C23B(CA) SIGN PANEL DETAIL

ENTRANCE-RAMPS AND EXIT-RAMPS

PM	LOCATION
R19.25	OASIS Rd SB ENTRANCE
R19.26	OASIS Rd NB EXIT
R19.53	OASIS Rd NB ENTRANCE
R19.67	OASIS Rd SB EXIT
R20.86	PINE GROVE Ave SB ENTRANCE
R20.87	PINE GROVE Ave NB EXIT
R21.09	PINE GROVE Ave NB ENTRANCE
R21.12	PINE GROVE Ave SB EXIT
R21.85	Rte 151 Jct NB EXIT
R22.02	Rte 151 Jct NB ENTRANCE
R22.03	Rte 151 Jct SB ENTRANCE
R22.34	Rte 151 Jct SB EXIT
R23.91	MOUNTAIN GATE NB EXIT
R23.92	MOUNTAIN GATE SB ENTRANCE
R24.24	MOUNTAIN GATE SB EXIT
R24.26	MOUNTAIN GATE NB ENTRANCE
R25.82	FAWNDALE Rd SB ENTRANCE
R25.86	FAWNDALE Rd NB EXIT
R26.22	FAWNDALE Rd NB ENTRANCE
R26.23	FAWNDALE Rd SB EXIT
R27.46	BRIDGE BAY Rd NB EXIT
R27.60	BRIDGE BAY Rd SB ENTRANCE
R27.62	BRIDGE BAY Rd NB ENTRANCE
R27.77	BRIDGE BAY Rd SB EXIT



TYPICAL SIGN LOCATIONS FOR ENTRANCE-RAMPS AND EXIT-RAMPS

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

REVISED BY | DATE REVISED
MICHAEL CONNER | KARLIE SMITH
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LAST REVISION 01-11-11 | DATE PLOTTED => 11-JAN-2011 TIME PLOTTED => 13:19

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	8	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

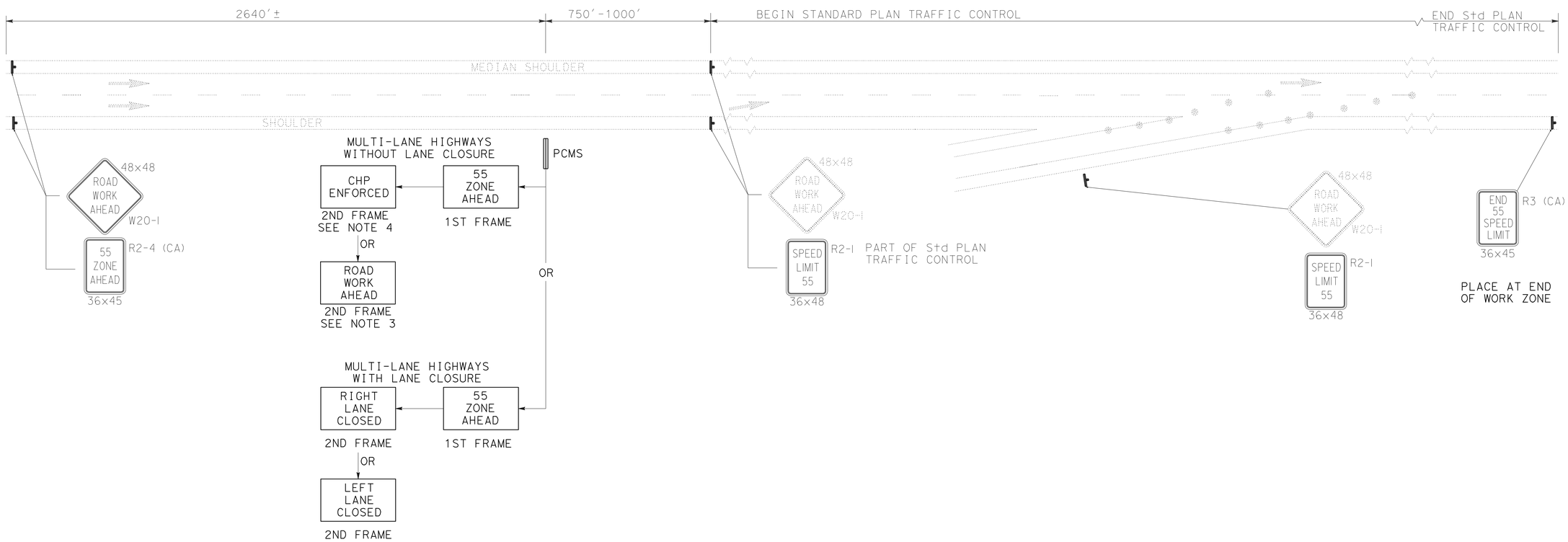
PLANS APPROVAL DATE 01-11-11

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. EXACT LOCATION OF ALL SIGNS TO BE DETERMINED BY THE ENGINEER.
2. CALIFORNIA CODES ARE DESIGNATED BY (CA), OTHERWISE FEDERAL CODES ARE SHOWN.
3. SEE STANDARD PLANS FOR LANE CLOSURE REQUIREMENTS.
4. USE THE "ROAD WORK AHEAD" SIGN FRAMES WHEN COZEEP OFFICERS ARE NOT REQUIRED TO BE PRESENT DURING THE ENTIRE DURATION OF THE SPEED REDUCTION.
5. COVER THE EXISTING SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE.
6. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.



TYPICAL SIGNING FOR REDUCED SPEED ZONE

CONSTRUCTION AREA SIGNS

NO SCALE

CS-2

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	9	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

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NOTES:

1. PRE-NOTIFICATION PCMS: PLACE NEAR RAMP AND ACTIVATE APPROXIMATELY 12 HOURS PRIOR TO RAMP CLOSURE.

EXIT WILL BE CLOSED	TODAY (or TONIGHT) XX:XXPM - XX:XXAM
FRAME 1	FRAME 2

2. RAMP CLOSED PCMS: MOVE PRE-NOTIFICATION PCMS APPROXIMATELY 1000 FEET BEFORE RAMP AND ACTIVATE DURING RAMP CLOSURE.

EXIT XXX CLOSED	FOLLOW DETOUR
FRAME 1	FRAME 2

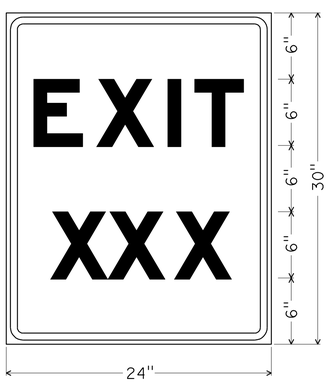
3. PLACE 7 DAYS PRIOR TO RAMP CLOSURE.
4. ADD SIGN(S) SPACED EQUALLY BETWEEN INTERCHANGES.
5. IF AVAILABLE, EXISTING ROUTE SHIELDS AND DIRECTIONS MAY BE USED IN PLACE OF SIGNS SHOWN.
6. RAMP CLOSED PCMS: PLACE BEFORE OPEN ENTRANCE RAMP AND ACTIVATE DURING RAMP CLOSURE.

NB (OR SB) I-5 ONRAMP CLOSED	FOLLOW DETOUR
FRAME 1	FRAME 2

7. EXIT NUMBER SHOWN AS FOLLOWS.

EXIT NAME	EXIT NUMBER
OASIS Rd	682
PINE GROVE Ave	684
Rte 151 Jct/SHASTA DAM Blvd	685
MOUNTAIN GATE/WONDERLAND Blvd	687
FAWNDALE Rd/WONDERLAND Blvd	689
BRIDGE BAY Rd	690

8. EXACT SIGN LOCATION TO BE DETERMINED BY THE ENGINEER.
9. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSTIVELY IDENTIFIED.



1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange;
[EXIT] E Mod; [XXX] E Mod;

EXIT NUMBER SIGN (SP1) DETAIL
(SEE NOTE 7)

CONSTRUCTION AREA SIGNS (PORTABLE)

CODE	PANEL SIZE	PANEL MESSAGE
G27-2 (5) (CA)	24" x 24"	I-5
M3-1	24" x 12"	NORTH
M3-3	24" x 12"	SOUTH
M4-8A	24" x 18"	END DETOUR
M4-10L	48" x 18"	DETOUR
M4-10R	48" x 18"	DETOUR
SC3 (CA)	48" x 18"	DETOUR
SC6-3 (CA)	48" x 48"	RAMP CLOSED
SP1	24" x 30"	EXIT XXX

ABBREVIATIONS:

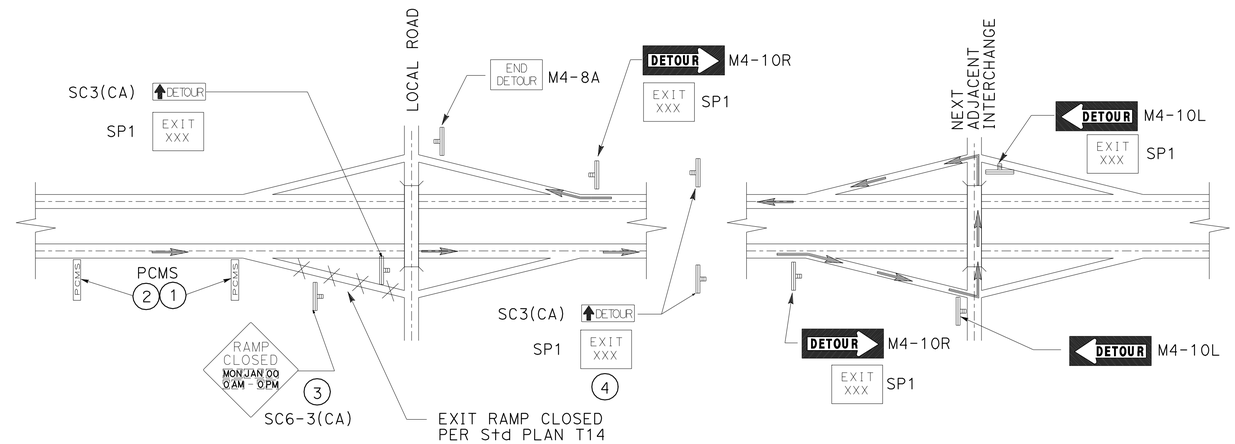
PCMS PORTABLE CHANGEABLE MESSAGE SIGN

LEGEND:

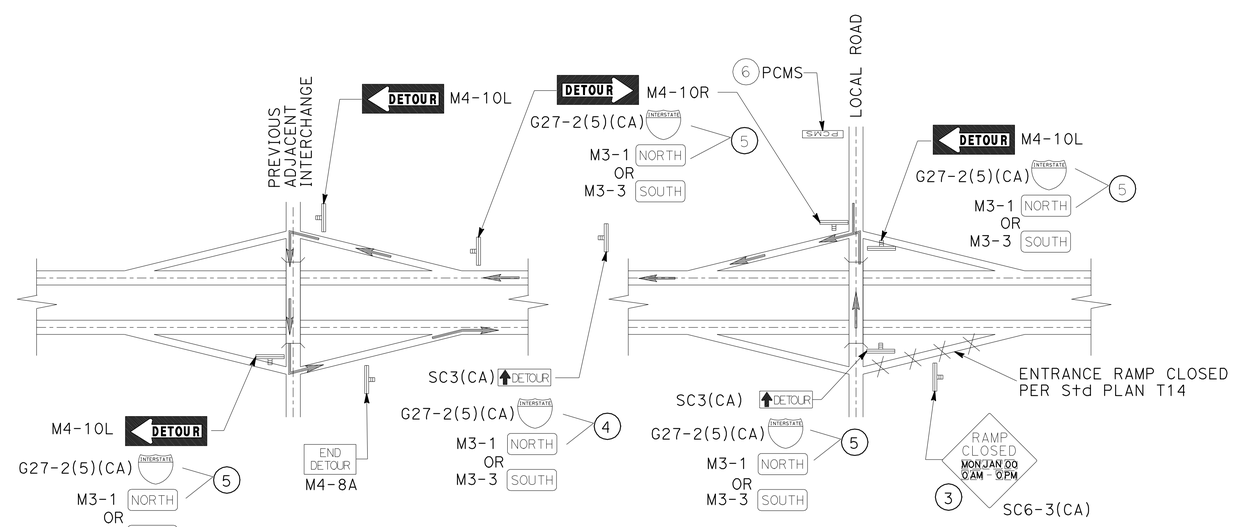
PORTABLE CHANGABLE MESSAGE SIGN

PORTABLE SIGN

DIRECTION OF TRAVEL



TYPICAL EXIT RAMP DETOUR SIGNING



TYPICAL ENTRANCE RAMP DETOUR SIGNING

DETOUR PLAN
NO SCALE

DE-1

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Caltrans MAINTENANCE

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CALCULATED-DESIGNED BY: MICHAEL CONNER
CHECKED BY: KARLIE SMITH
REVISED BY
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LAST REVISION 01-11-11
DATE PLOTTED => 11-JAN-2011
TIME PLOTTED => 13:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	10	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

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NOTE:

1. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.

LEGEND:

⇨ DIRECTION OF TRAVEL

ABBREVIATIONS:

Mid MIDDLE

THERMOPLASTIC TRAFFIC STRIPE (SPRAYABLE)

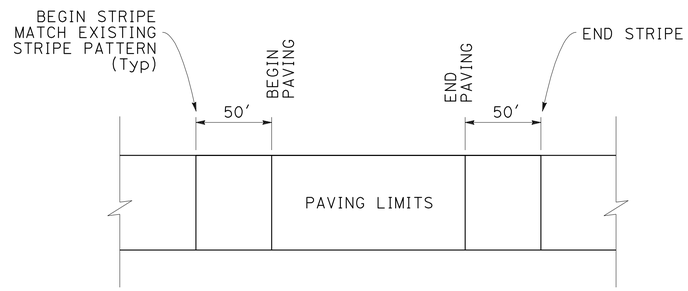
DESCRIPTION	POSTMILE LIMITS	DETAIL 8	DETAIL 12	DETAIL 14A	DETAIL 22	DETAIL 25	DETAIL 25A	DETAIL 27	DETAIL 27B	DETAIL 36	DETAIL 36A	DETAIL 38A
	PM-PM	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF
NB MAINLINE	R19.0/R28.2		71,280	3888		7815		40,392	48,207			200
SB MAINLINE	R19.0/R28.2		63,941	3456		7815		40,392	48,207			200
RAMPS	R19.0/R28.2	2650	1600		1225		18,550		39,912	3710	3545	80
SUBTOTAL		2650	136,821	7344	1225	15,630	18,550	80,784	136,326	3710	3545	480
TOTAL		407,065										

PAVEMENT MARKER (RETROREFLECTIVE-RECESSED)

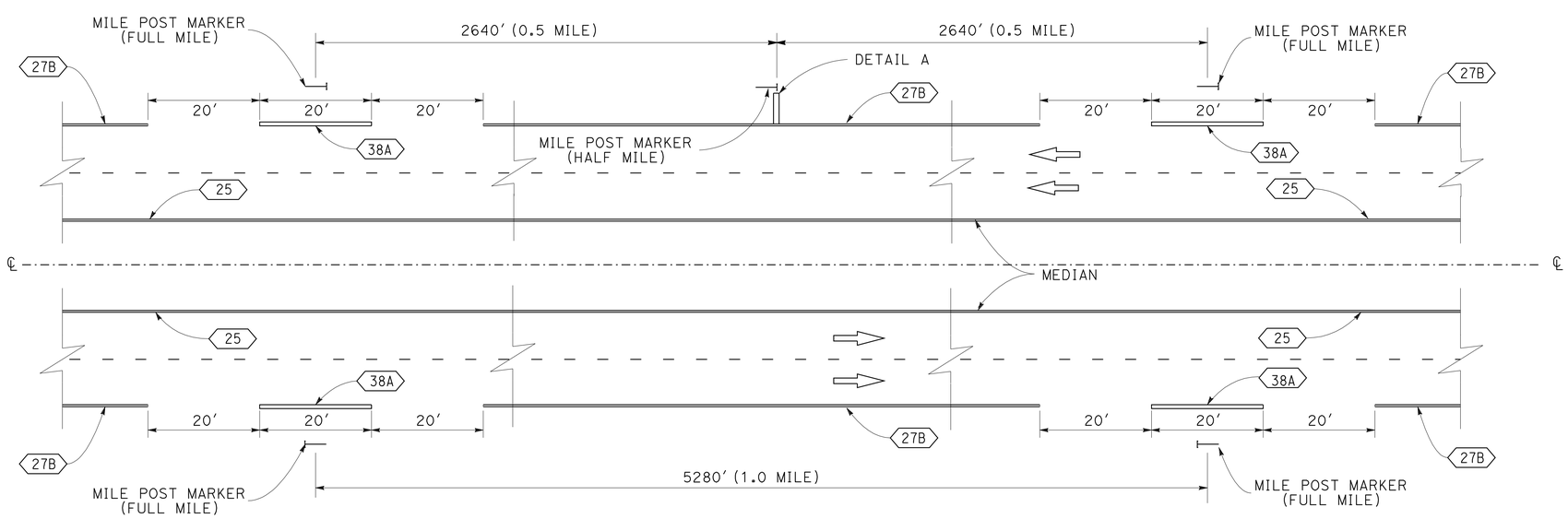
DIRECTION	PM/PM	TYPE C	TYPE D	TYPE G	TYPE H
		EA	EA	EA	EA
NB MAINLINE	R23.00/R28.15	36		700	569
SB MAINLINE	R23.00/R28.15	36		568	569
RAMPS	R23.00/R28.15		105	244	415
SUBTOTAL		72	105	1512	1553
TOTAL		3242			

PAVEMENT MARKER (RETROREFLECTIVE)

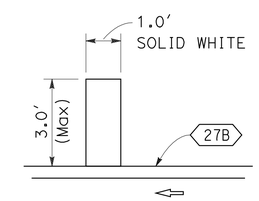
DIRECTION	PM/PM	TYPE A	TYPE C	TYPE G	TYPE H
		EA	EA	EA	EA
NB MAINLINE	R19.02/R23.00	1	72	788	439
SB MAINLINE	R19.02/R23.00		60	767	405
RAMPS	R19.02/R23.00			254	361
SUBTOTAL		1	132	1809	1205
TOTAL		3147			



TRAFFIC STRIPE MATCH DETAIL



TYPICAL HALF MILE AND MILE POST STRIPE



DETAIL A

* ACTUAL LENGTH MAY VARY DUE TO PAVEMENT WIDTH

PAVEMENT DELINEATION DETAILS AND QUANTITIES

NO SCALE

PDQ-1

REVISED BY | DATE REVISED

MICHAEL CONNER | KARLIE SMITH

CALCULATED-DESIGNED BY | CHECKED BY

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LAST REVISION 01-11-11 | DATE PLOTTED => 11-JAN-2011 | TIME PLOTTED => 13:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	11	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

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NOTE:

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THERMOPLASTIC PAVEMENT MARKING

DESCRIPTION		PM	Rt	Mid	EA	SQFT	REMARKS
NB MAINLINE			X		9	27.0	DETAIL A
		R22.14		X	1	42.0	TYPE VI ARROW
		R22.17		X	1	42.0	TYPE VI ARROW
		R22.19		X	1	42.0	TYPE VI ARROW
		R27.39		X	1	42.0	TYPE VI ARROW
		R27.41		X	1	42.0	TYPE VI ARROW
		R27.42		X	1	42.0	TYPE VI ARROW
SB MAINLINE			X		9	27.0	DETAIL A
OASIS Rd	NB EXIT RAMP	R19.26		X	1	33.0	TYPE V ARROW
				X	1	27.0	TYPE VII (L) ARROW
				X	1	15.0	TYPE IV (R) ARROW
PINE GROVE Ave	SB ENTRANCE RAMP	R20.86		X	1	33.0	TYPE V ARROW
	NB EXIT RAMP	R20.87		X	2	66.0	TYPE V ARROW
				X	2	44.0	STOP
				X	1	77.0	ROAD CONNECTION LIMIT LINE
	NB ENTRANCE RAMP	R21.09		X	1	33.0	TYPE V ARROW
	SB EXIT RAMP	R21.12		X	2	66.0	TYPE V ARROW
				X	2	44.0	STOP
				X	1	58.0	ROAD CONNECTION LIMIT LINE
Rte 151 Jct	NB EXIT RAMP	R21.85		X	2	64.0	SIGNAL
				X	2	62.0	AHEAD
	SB ENTRANCE RAMP	R22.03		X	1	33.0	TYPE V ARROW
	SB EXIT RAMP	R22.34		X	1	23.0	ROAD CONNECTION LIMIT LINE
				X	1	42.0	TYPE III (R) ARROW
				X	1	22.0	ONLY
				X	1	24.0	TURN
				X	1	26.0	RIGHT
				X	1	32.0	SIGNAL
				X	1	31.0	AHEAD
MOUNTAIN GATE	NB EXIT RAMP	R23.91		X	2	66.0	TYPE V ARROW
				X	2	44.0	STOP
				X	1	69.0	ROAD CONNECTION LIMIT LINE
	SB ENTRANCE RAMP	R23.92		X	1	33.0	TYPE V ARROW
	SB EXIT RAMP	R24.24		X	2	66.0	TYPE V ARROW
				X	2	44.0	STOP
				X	1	65.0	ROAD CONNECTION LIMIT LINE
	NB ENTRANCE RAMP	R24.26		X	1	33.0	TYPE V ARROW
FAWNDALE Rd	SB ENTRANCE RAMP	R25.82		X	2	66.0	TYPE V ARROW
				X	1	155.0	ISLAND
	NB EXIT RAMP	R25.86		X	2	66.0	TYPE V ARROW
				X	2	44.0	STOP
				X	1	80.0	ROAD CONNECTION LIMIT LINE
	NB ENTRANCE RAMP	R26.22		X	2	66.0	TYPE V ARROW
				X	1	96.0	ISLAND
	SB EXIT RAMP	R26.23		X	2	66.0	TYPE V ARROW
				X	1	22.0	STOP
				X	1	80.0	ROAD CONNECTION LIMIT LINE
BRIDGE BAY Rd	NB EXIT RAMP	R27.46		X	2	66.0	TYPE V ARROW
	SB ENTRANCE RAMP	R27.60		X	1	33.0	TYPE V ARROW
	NB ENTRANCE RAMP	R27.62		X	1	33.0	TYPE V ARROW
	SB EXIT RAMP	R27.77		X	2	66.0	TYPE V ARROW
TOTAL						2520.0	

REMOVE THERMOPLASTIC PAVEMENT MARKING

DESCRIPTION		PM	Mid	EA	SQFT	REMARKS
NB MAINLINE		R22.14	X	1	42.0	TYPE VI ARROW
		R22.17	X	1	42.0	TYPE VI ARROW
		R22.19	X	1	42.0	TYPE VI ARROW
		R27.39	X	1	42.0	TYPE VI ARROW
		R27.41	X	1	42.0	TYPE VI ARROW
		R27.42	X	1	42.0	TYPE VI ARROW
OASIS Rd	NB EXIT RAMP	R19.26	X	1	33.0	TYPE V ARROW
			X	1	27.0	TYPE VII (L) ARROW
			X	1	15.0	TYPE IV (R) ARROW
PINE GROVE Ave	SB ENTRANCE RAMP	R20.86	X	1	33.0	TYPE V ARROW
	NB EXIT RAMP	R20.87	X	2	66.0	TYPE V ARROW
			X	2	44.0	STOP
			X	1	77.0	ROAD CONNECTION LIMIT LINE
	NB ENTRANCE RAMP	R21.09	X	1	33.0	TYPE V ARROW
	SB EXIT RAMP	R21.12	X	2	66.0	TYPE V ARROW
			X	2	44.0	STOP
			X	1	58.0	ROAD CONNECTION LIMIT LINE
Rte 151 Jct	NB EXIT RAMP	R21.85	X	2	64.0	SIGNAL
			X	2	62.0	AHEAD
	SB ENTRANCE RAMP	R22.03	X	1	33.0	TYPE V ARROW
	SB EXIT RAMP	R22.34	X	1	23.0	ROAD CONNECTION LIMIT LINE
			X	1	42.0	TYPE III (R) ARROW
			X	1	22.0	ONLY
			X	1	24.0	TURN
			X	1	26.0	RIGHT
			X	1	32.0	SIGNAL
			X	1	31.0	AHEAD
MOUNTAIN GATE	NB EXIT RAMP	R23.91	X	2	66.0	TYPE V ARROW
			X	2	44.0	STOP
			X	1	69.0	ROAD CONNECTION LIMIT LINE
	SB ENTRANCE RAMP	R23.92	X	1	33.0	TYPE V ARROW
	SB EXIT RAMP	R24.24	X	2	66.0	TYPE V ARROW
			X	2	44.0	STOP
			X	1	65.0	ROAD CONNECTION LIMIT LINE
	NB ENTRANCE RAMP	R24.26	X	1	33.0	TYPE V ARROW
FAWNDALE Rd	SB ENTRANCE RAMP	R25.82	X	2	66.0	TYPE V ARROW
			X	1	155.0	ISLAND
	NB EXIT RAMP	R25.86	X	2	66.0	TYPE V ARROW
			X	2	44.0	STOP
			X	1	80.0	ROAD CONNECTION LIMIT LINE
	NB ENTRANCE RAMP	R26.22	X	2	66.0	TYPE V ARROW
			X	1	96.0	ISLAND
	SB EXIT RAMP	R26.23	X	2	66.0	TYPE V ARROW
			X	1	22.0	STOP
			X	1	80.0	ROAD CONNECTION LIMIT LINE
BRIDGE BAY Rd	NB EXIT RAMP	R27.46	X	2	66.0	TYPE V ARROW
	SB ENTRANCE RAMP	R27.60	X	1	33.0	TYPE V ARROW
	NB ENTRANCE RAMP	R27.62	X	1	33.0	TYPE V ARROW
	SB EXIT RAMP	R27.77	X	2	66.0	TYPE V ARROW
TOTAL					2466.0	

PAVEMENT DELINEATION QUANTITIES

PDQ-2

REVISED BY | DATE REVISED
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	12	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

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NOTES:

1. (N) - NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.
2. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.

ABBREVIATIONS:

WIM WEIGH-IN-MOTION

RUMBLE STRIP

DESCRIPTION	POST MILE LIMITS	Sta
NB MAINLINE	R19.02-R24.85	616
	R24.91-R28.15	344
SB MAINLINE	R19.02-R24.85	616
	R24.91-R28.15	344
TOTAL		1920

METAL BEAM GUARD RAILING

DIRECTION	LOCATION	PM	Rt/Lt	RECONSTRUCT MBGR	ALTERNATIVE IN-LINE TERMINAL SYSTEM	END CAP
				LF	EA	EA
SB	BRIDGE BAY Rd SB ENTRANCE RAMP	R27.60	Rt	1660	1	1
	BRIDGE BAY Rd SB EXIT RAMP	R27.77	Rt	800		1
TOTAL				2460	1	2

COLD PLANE ASPHALT CONCRETE PAVEMENT

DIRECTION	POST MILE	(N) LENGTH	(N) WIDTH	AREA	REMARKS
		LF	LF	SQYD	
NB	R19.02	40	63	280	CONFORM GRIND AT BEGIN OF PROJECT (NB MAINLINE)
	R19.26	10	33	37	CONFORM GRIND AT RAMP (OASIS Rd NB EXIT)
	R19.40	246	63	1722	CONFORM GRIND AT OASIS Rd OVERCROSSING (NB MAINLINE)
	R19.53	10	25	28	CONFORM GRIND AT RAMP (OASIS Rd NB ENTRANCE)
	R20.87	20	22	48	CONFORM GRIND AT RAMP UP TO PCC (PINE GROVE Ave NB EXIT)
	R21.00	259	63	1813	CONFORM GRIND AT PINE GROVE Ave OVERCROSSING (NB MAINLINE)
	R21.09	10	93	104	CONFORM GRIND AT RAMP (PINE GROVE Ave NB ENTRANCE)
	R21.85	750	29	2417	CONFORM GRIND AT RAMP (Rte 151 Jct NB EXIT)
	R22.02	750	40	3334	CONFORM GRIND AT RAMP (Rte 151 Jct NB ENTRANCE)
	R22.14	268	63	1876	CONFORM GRIND AT Rte 151 Jct OVERCROSSING (NB MAINLINE)
	R22.41	246	51	1394	CONFORM GRIND AT UNION SCHOOL Rd OVERCROSSING (NB MAINLINE)
	R23.91	10	126	140	CONFORM GRIND AT RAMP (MOUNTAIN GATE NB EXIT)
	R24.08	246	51	1394	CONFORM GRIND AT MOUNTAIN GATE OVERCROSSING (NB MAINLINE)
	R24.26	10	125	139	CONFORM GRIND AT RAMP (MOUNTAIN GATE NB ENTRANCE)
	R24.84	40	51	227	CONFORM GRIND AT WIM (NB MAINLINE)
	R24.91	40	51	227	CONFORM GRIND AT WIM (NB MAINLINE)
	R25.86	10	135	150	CONFORM GRIND AT RAMP (FAWNDALE Rd NB EXIT)
	R26.04	246	44	1203	CONFORM GRIND AT FAWNDALE Rd OVERCROSSING (NB MAINLINE)
	R26.22	10	105	117	CONFORM GRIND AT RAMP (FAWNDALE Rd NB ENTRANCE)
	R27.46	115	2	26	CONFORM GRIND AT PCC CURB (BRIDGE BAY Rd NB EXIT)
	R27.62	20	32	72	CONFORM GRIND AT RAMP (BRIDGE BAY Rd)
	R27.62	370	2	83	CONFORM GRIND AT PCC CURB (BRIDGE BAY Rd NB ENTRANCE)
	R27.63	246	41	1121	CONFORM GRIND AT BRIDGE BAY Rd OVERCROSSING (NB MAINLINE)
	R28.15	40	35	156	CONFORM GRIND AT END OF PROJECT (NB MAINLINE)
SB	R19.02	40	63	280	CONFORM GRIND AT BEGIN OF PROJECT (SB MAINLINE)
	R19.25	10	33	37	CONFORM GRIND AT RAMP (OASIS Rd SB ENTRANCE)
	R19.40	246	63	1722	CONFORM GRIND AT OASIS Rd OVERCROSSING (SB MAINLINE)
	R19.67	10	23	26	CONFORM GRIND AT RAMP (OASIS Rd SB EXIT)
	R20.86	10	45	50	CONFORM GRIND AT RAMP (PINE GROVE Ave SB ENTRANCE)
	R21.00	259	63	1813	CONFORM GRIND AT PINE GROVE Ave OVERCROSSING (SB MAINLINE)
	R21.12	20	23	50	CONFORM GRIND AT RAMP UP TO PCC (PINE GROVE Ave SB EXIT)
	R22.03	20	28	63	CONFORM GRIND AT RAMP (Rte 151 Jct SB ENTRANCE)
	R22.14	268	51	1519	CONFORM GRIND AT Rte 151 Jct OVERCROSSING (SB MAINLINE)
	R22.34	10	63	70	CONFORM GRIND AT RAMP (Rte 151 Jct SB EXIT)
	R22.41	246	51	1394	CONFORM GRIND AT UNION SCHOOL Rd OVERCROSSING (SB MAINLINE)
	R23.92	10	125	139	CONFORM GRIND AT RAMP (MOUNTAIN GATE SB ENTRANCE)
	R24.08	246	51	1394	CONFORM GRIND AT MOUNTAIN GATE OVERCROSSING (SB MAINLINE)
	R24.24	10	105	117	CONFORM GRIND AT RAMP (MOUNTAIN GATE SB EXIT)
	R24.84	40	51	227	CONFORM GRIND AT WIM (SB MAINLINE)
	R24.91	40	51	227	CONFORM GRIND AT WIM (SB MAINLINE)
	R25.82	10	139	155	CONFORM GRIND AT RAMP (FAWNDALE Rd SB ENTRANCE)
	R26.04	246	44	1203	CONFORM GRIND AT FAWNDALE Rd OVERCROSSING (SB MAINLINE)
	R26.23	10	130	145	CONFORM GRIND AT RAMP (FAWNDALE Rd SB EXIT)
	R27.60	20	32	72	CONFORM GRIND AT RAMP (BRIDGE BAY Rd)
	R27.60	20	31	69	CONFORM GRIND AT RAMP (BRIDGE BAY Rd)
	R27.60	65	2	15	CONFORM GRIND AT PCC CURB (BRIDGE BAY Rd SB ENTRANCE)
	R27.63	246	41	1121	CONFORM GRIND AT BRIDGE BAY Rd OVERCROSSING (SB MAINLINE)
	R27.77	940	2	209	CONFORM GRIND AT PCC CURB (BRIDGE BAY Rd SB EXIT)
	R28.15	40	35	156	CONFORM GRIND AT END OF PROJECT (SB MAINLINE)
				53	CONFORM GRIND AT 49 DRAINAGE INLETS
TOTAL				30,434	

SUMMARY OF QUANTITIES

Q-1

REVISED BY | DATE REVISED
MICHAEL CONNER | KARLIE SMITH
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR
LANCE BROWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® MAINTENANCE

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LAST REVISION 01-11-11 | DATE PLOTTED => 11-JAN-2011 | TIME PLOTTED => 13:20

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	13	23

REGISTERED CIVIL ENGINEER 01-11-11 DATE

01-13-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER MICHAEL A. CONNER No. C73123 Exp. 12-31-12 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

1. EXISTING UTILITY FACILITIES HAVE NOT BEEN POSITIVELY LOCATED, AND HAVE NOT BEEN PLOTTED ON PORTIONS OF THESE PLANS.

ABBREVIATIONS:

RHMA-O-HB RUBBERIZED HOT MIX ASPHALT (OPEN GRADED HIGH BINDER)

CAP EXISTING ASPHALT CONCRETE DIKE

DIRECTION	PM LIMITS	L†	R†	PLACE HOT MIX ASPHALT DIKE (TYPE A) LF	(TYPE E) LF	(TYPE F) LF	MINOR HMA TON
NB	R19.02-R19.29		X		1400		
	R19.35-R19.41		X		300		
	R19.40-R19.48		X		400		
	R20.14-R20.22		X		400		
	R20.50-R21.01		X		2700		
	R21.00-R21.40		X		2100		
	R21.41-R21.50		X		500		
	R21.52-R21.56		X		200		
	R21.57-R21.97		X		2100		
	R23.91-R24.01		X		520		
	R25.86-R26.04		X	950			
	R26.22-R26.41		X		1000		
	R26.32-R26.44		X	640			
	R27.15-R28.72		X	8270			
	R27.60-R28.10		X	2650			
	R19.05-R19.43		X		2000		
SB	R19.99-R20.02		X		175		
	R20.07-R20.10		X		160		
	R20.11-R20.24		X		700		
	R20.83-R20.94		X		600		
	R21.45-R21.48		X		140		
	R21.48-R21.54		X		330		
	R21.56-R21.59		X		140		
	R21.60-R21.64		X		200		
	R21.69-R21.83		X		900		
	R22.15-R22.28		X		700		
	R23.92-R24.02		X		520		
	R25.82-R26.03		X		1100		
	R26.23-R26.51		X		1460		
	R26.35-R26.51	X			850		
	R26.53-R26.63	X			530		
	R26.63-R26.96		X	1750			
	R27.00-R27.06		X	320			
	R27.12-R27.35		X	1220			
	R27.60-R27.89		X			1540	
	R27.63-R28.15	X				600	
	R28.04-R27.65		X			120	
TOTAL				15,800	22,125	2260	593

ROADWAY QUANTITIES SUMMARY

DESCRIPTION		POST MILE LIMITS	RHMA-O-HB TON	IMPORTED MATERIAL (SHOULDER BACKING) TON	TACK COAT TON
MAINLINE	NB	R19.02/R28.15	17,839	1055	85.6
MAINLINE	SB	R19.02/R28.15	17,082	756	82.0
OASIS Rd	SB ENTRANCE	R19.25	269	138	1.3
	NB EXIT	R19.26	183	103	0.9
	NB ENTRANCE	R19.53	238	109	1.2
	SB EXIT	R19.67	92	54	0.5
PINE GROVE Ave	SB ENTRANCE	R20.86	206	36	1.0
	NB EXIT	R20.87	106	17	0.6
	NB ENTRANCE	R21.09	199	18	1.0
	SB EXIT	R21.12	98	18	0.5
Rte 151 Jct	NB EXIT	R21.85	428	82	2.1
	NB ENTRANCE	R22.02	401	125	2.0
	SB ENTRANCE	R22.03	198	105	1.0
	SB EXIT	R22.34	148	37	0.8
MOUNTAIN GATE	NB EXIT	R23.91	187	94	0.9
	SB ENTRANCE	R23.92	296	109	1.5
	SB EXIT	R24.24	200	114	1.0
	NB ENTRANCE	R24.26	300	18	1.5
FAWNDALE Rd	SB ENTRANCE	R25.82	348	126	1.7
	NB EXIT	R25.86	263	75	1.3
	NB ENTRANCE	R26.22	223	47	1.1
	SB EXIT	R26.23	285	90	1.4
BRIDGE BAY Rd	NB EXIT	R27.46	206	30	1.0
	SB ENTRANCE	R27.60	268	32	1.3
	NB ENTRANCE	R27.62	193		1.0
	SB EXIT	R27.77	378	46	1.9
TOTAL			40,634	3434	196.1

SUMMARY OF QUANTITIES

Q-2

REVISED BY | DATE REVISED

MICHAEL CONNER | KARLIE SMITH

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: LANCE BROWN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans MAINTENANCE

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LAST REVISION 01-11-11 | DATE PLOTTED => 11-JAN-2011 | TIME PLOTTED => 13:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	14	23

ART 01-11-11
REGISTERED ELECTRICAL ENGINEER DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A.P. ROBLES No. E15293 Exp. 3-31-11 ELECTRICAL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

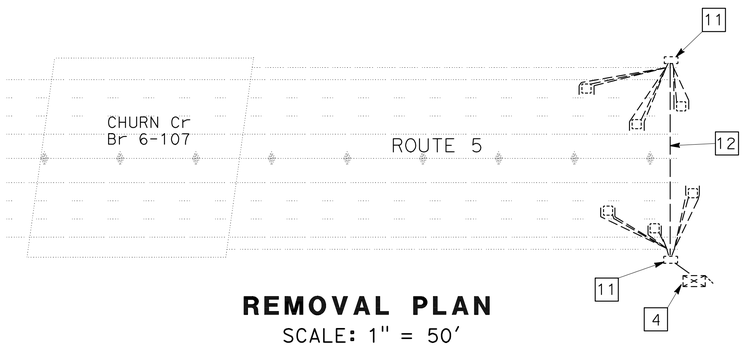
LEGEND:

Exist LOOP/AXLE SENSOR ARRAY

LOOP/AXLE SENSOR ARRAY

ABBREVIATIONS;

STC SCREENED TRANSMISSION CABLE



REMOVAL PLAN
SCALE: 1" = 50'

NOTES (THIS SHEET):

1. AB Exist LOOP/AXLE SENSOR ARRAYS.
2. EXACT LOCATION OF LOOP/AXLE SENSOR ARRAYS WILL BE DETERMINED BY THE ENGINEER.
3. SEE AXLE SENSOR INSTALLATION DETAIL, SHEET E-2.

4 TMS CABINET TO REMAIN.

5 2"C, 3 TWISTED LOOP CONDUCTOR PAIRS, 3 STC.

6 2"C, 3 STC.

7 SPLICE LOOP CONDUCTORS TO NEW DLC.

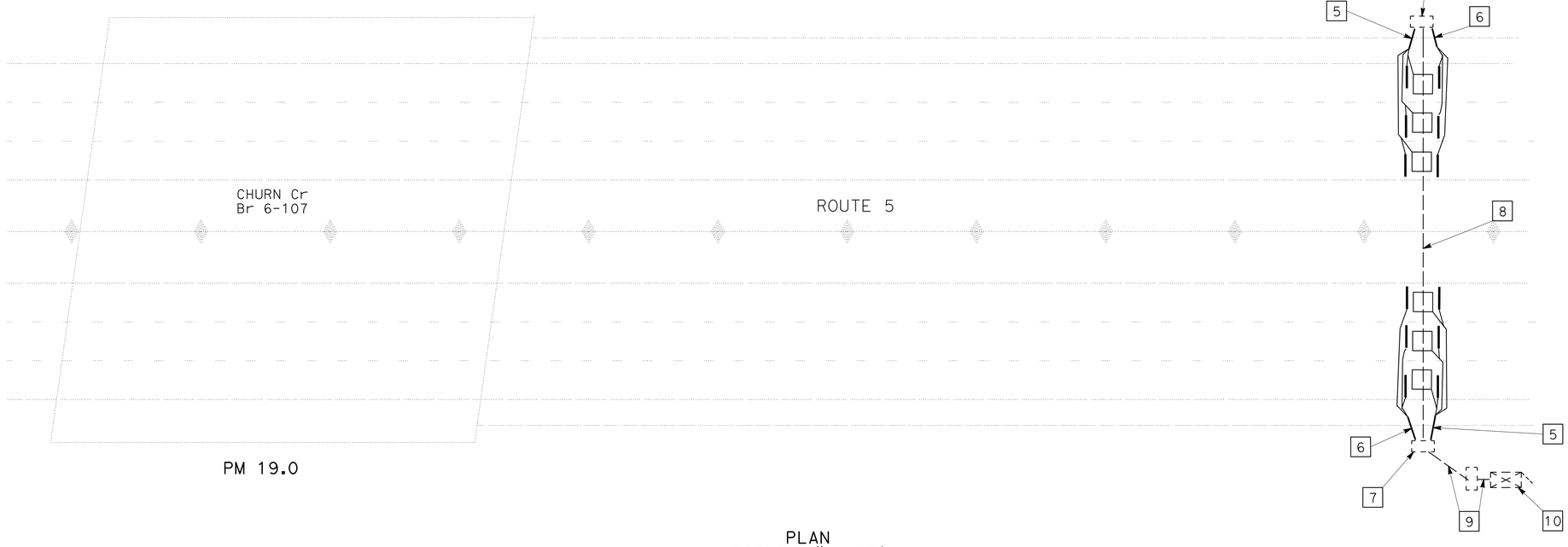
8 Exist 2"C, 3 DLC, 6 STC. REPLACE 6 STC.

9 Exist 3"C, 6 DLC, 12 STC. REPLACE 12 STC.

10 COIL 10' OF NEW CABLES IN CABINET.

11 PB TO REMAIN.

12 CONDUIT TO REMAIN.



PLAN
SCALE: 1" = 20'

TMS No. 312

TRAFFIC MONITORING STATION

SCALE: AS SHOWN

E-1

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY	DATE REVISED
ARTURO ROBLES	KAREN CARMO
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	ROB STINGER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

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LAST REVISION 01-11-11 DATE PLOTTED => 11-JAN-2011 TIME PLOTTED => 13:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	15	23

ART 01-11-11
REGISTERED ELECTRICAL ENGINEER DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A.P. ROBLES No. E15293 Exp. 3-31-11 ELECTRICAL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES (THIS SHEET):

1. AB EXISTING LOOPS

2 Exist 2"C, 3 DLC, 1 TC (CCTV).

3 Exist 2"C, 5 DLC, 1 TC (CCTV).

4 Exist 2"C, 6 DLC, 1 TC (CCTV).

5 Exist 2"C, 1 TC (CCTV).

6 Exist 2"C, 6 DLC, 1 TC (TMS).

7 Exist 2"C, 2 TC.

8 CENTER TYPE A LOOP IN LANE.

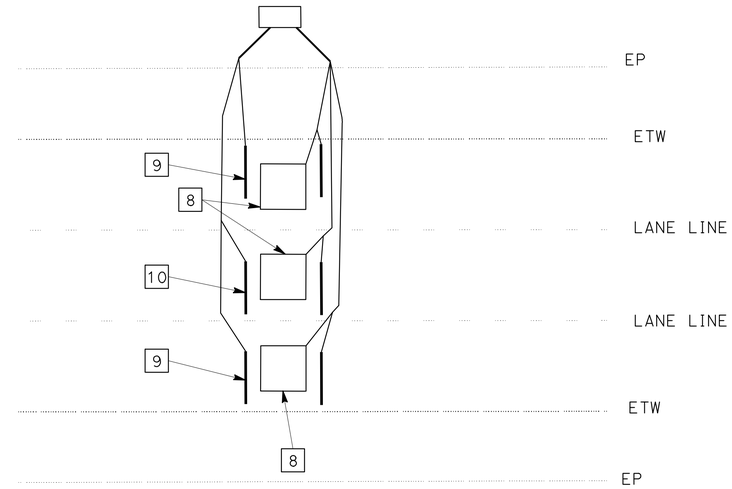
9 INSTALL AXLE SENSOR 2' FROM LOOP AND 2" FROM ETW.

10 INSTALL AXLE SENSOR 2' FROM LOOP AND 2" FROM LANE LINE.

11 PB IS UNDER PAVEMENT. LOCATE AND REPLACE WITH No. 5(T) PB.

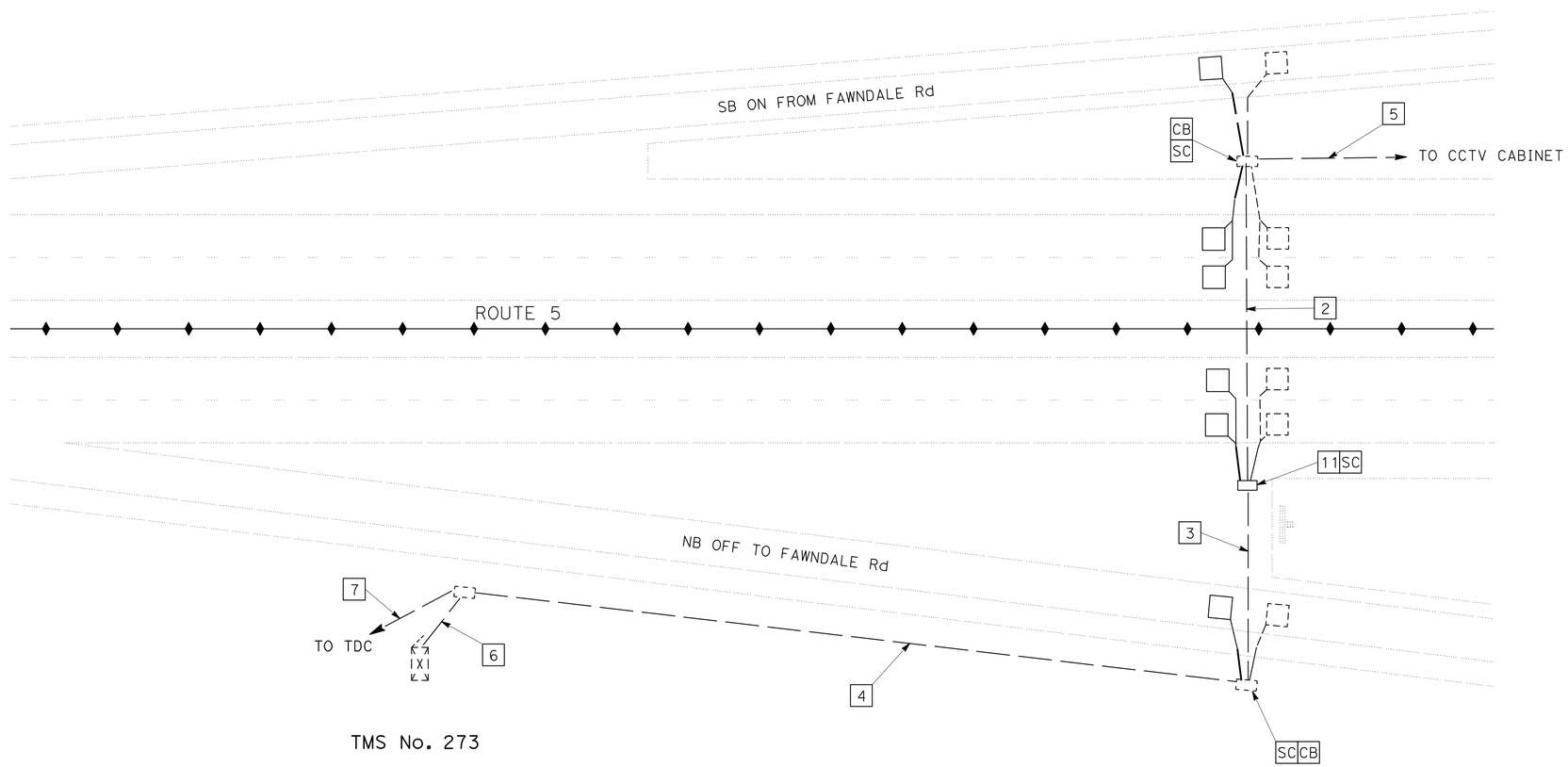
ABBREVIATIONS;

TC TELEPHONE CABLE



AXLE SENSOR INSTALLATION

NO SCALE



TMS No. 273

TRAFFIC MONITORING STATION

SCALE: 1" = 20'

E-2

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

REVISED BY | DATE REVISED

ARTURO ROBLES | KAREN CARMO

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: ROB STINGER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

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LAST REVISION 01-11-11 | DATE PLOTTED => 11-JAN-2011 | TIME PLOTTED => 13:21

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	16	23

ART 01-11-11
REGISTERED ELECTRICAL ENGINEER DATE

01-11-11
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER A.P. ROBLES No. E15293 Exp. 3-31-11 ELECTRICAL STATE OF CALIFORNIA

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ABBREVIATIONS;

CL CENTERLINE

EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS TO BE MAINTAINED

TYPE	LOCATION	DESCRIPTION
CMS	Sha-5-PM R19.40	OASIS Rd OC FNBT
CMS	Sha-5-PM R19.40	OASIS Rd OC FSBT
CMS	Sha-5-PM R20.98	PINE GROVE Ave OC FNBT
CCTV	Sha-5-PM R20.98	PINE GROVE Ave OC
HAR FLASHER	Sha-5-PM R21.00	PINE GROVE Ave OC FSBT
CCTV	Sha-5-PM R26.02	FAWNDALE Rd OC
CCTV	Sha-5-PM R28.2	PIT RIVER Br

EXISTING TRAFFIC MONITORING STATIONS TO BE PROTECTED IN PLACE

ID No.	LOCATION	TYPE	DESCRIPTION	EQUIPMENT
R16	Sha-5-R19.25	RAMP	OASIS Rd SB ON-RAMP (130' S OF OASIS Rd℄)	1 LOOP
R17	Sha-5-R19.25	RAMP	OASIS Rd NB OFF-RAMP (183' S OF OASIS Rd ℄)	1 LOOP
R18	Sha-5-R19.53	RAMP	OASIS Rd NB ON-RAMP (185' N OF OASIS Rd ℄)	1 LOOP
R19	Sha-5-R20.862	RAMP	OASIS Rd SB OFF-RAMP (156' N OF OASIS Rd ℄)	1 LOOP
R20	Sha-5-R19.402	RAMP	PINE GROVE Ave SB ON-RAMP (173' S OF PINE GROVE Ave ℄)	1 LOOP
R21	Sha-5-R20.86	RAMP	PINE GROVE Ave NB OFF-RAMP (186' S OF PINE GROVE Ave ℄)	1 LOOP
R22	Sha-5-R21.09	RAMP	PINE GROVE Ave NB ON-RAMP (125' N OF PINE GROVE Ave ℄)	1 LOOP
R23	Sha-5-R21.12	RAMP	PINE GROVE Ave SB OFF-RAMP (187' N OF PINE GROVE Ave ℄)	1 LOOP
R24	Sha-5-R22.0	RAMP	NB OFF-RAMP TO WB ROUTE 151	2 LOOPS
R25	Sha-5-R22.02	RAMP	NB ON-RAMP FROM EB ROUTE 151	1 LOOP
R26	Sha-5-R22.02	RAMP	SB ON-RAMP FROM EB ROUTE 151	1 LOOP
R27	Sha-5-R22.34	RAMP	SB OFF-RAMP TO WB ROUTE 151	1 LOOP
R28	Sha-5-R23.91	RAMP	MOUNTAIN GATE NB OFF-RAMP (188' S OF MOUNTAIN GATE ℄)	1 LOOP
R29	Sha-5-R23.92	RAMP	MOUNTAIN GATE SB ON-RAMP (188' S OF MOUNTAIN GATE ℄)	1 LOOP
309	Sha-5-R24.88	WIM	ON MAINLINE (0.8 MILES N OF MOUNTAIN GATE OC)	8 LOOPS
R30	Sha-5-R24.24	RAMP	MOUNTAIN GATE SB OFF-RAMP (166' N OF MOUNTAIN GATE ℄)	1 LOOP
R31	Sha-5-R24.26	RAMP	MOUNTAIN GATE NB ON-RAMP (170' N OF MOUNTAIN GATE ℄)	1 LOOP
R32	Sha-5-R25.86	RAMP	FAWNDALE Rd SB ON-RAMP	1 LOOP
R33	Sha-5-R25.88	RAMP	FAWNDALE Rd NB OFF-RAMP	1 LOOP
R34	Sha-5-R26.22	RAMP	FAWNDALE Rd NB ON-RAMP (190' N OF FAWNDALE Rd ℄)	1 LOOP
R35	Sha-5-R26.23	RAMP	FAWNDALE Rd SB OFF-RAMP (156' N OF FAWNDALE Rd ℄)	1 LOOP
R36	Sha-5-R27.62	RAMP	BRIDGE BAY NB-OFF RAMP	1 LOOP
R37	Sha-5-R27.6	RAMP	BRIDGE BAY SB ON-RAMP	1 LOOP
R38	Sha-5-R27.62	RAMP	BRIDGE BAY NB ON-RAMP	1 LOOP
R39	Sha-5-R27.77	RAMP	BRIDGE BAY SB OFF-RAMP	1 LOOP

TRAFFIC MONITORING STATION E-3

REVISED BY | DATE REVISED
ARTURO ROBLES | KAREN CARMO
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: ROB STINGER

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® ELECTRICAL DESIGN

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LAST REVISION 01-11-11 | DATE PLOTTED => 11-JAN-2011 | TIME PLOTTED => 13:21

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	17	23

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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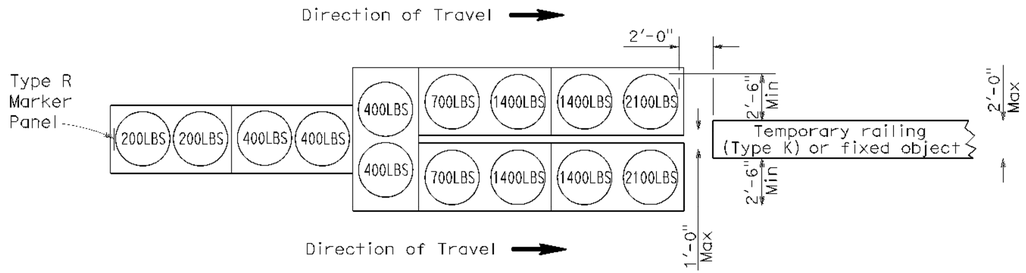
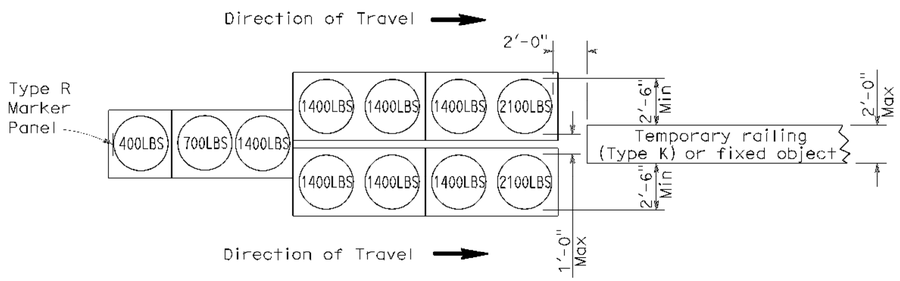
To accompany plans dated 01-11-11



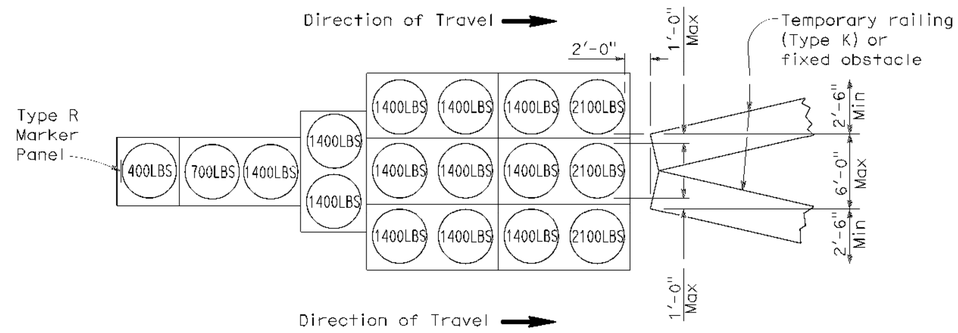
ARRAY 'TU14'

Approach speed 45 mph or more



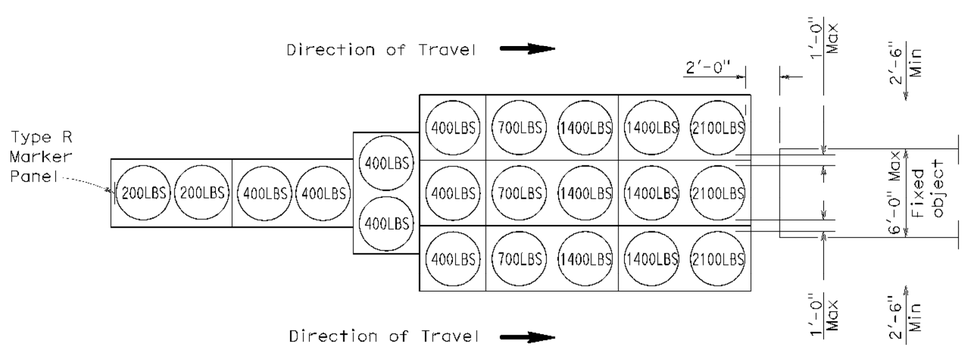
ARRAY 'TU11'

Approach speed less than 45 mph



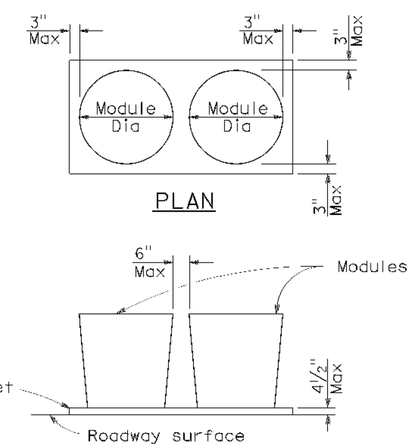
ARRAY 'TU17'

Approach speed less than 45 mph



ARRAY 'TU21'

Approach speed 45 mph or more



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (UNIDIRECTIONAL)

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	18	23

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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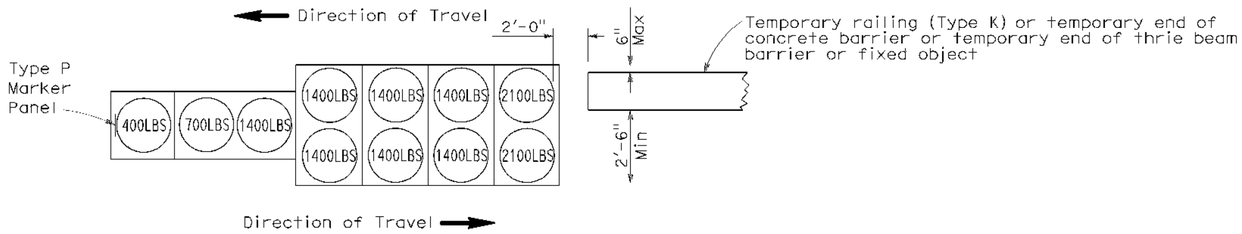
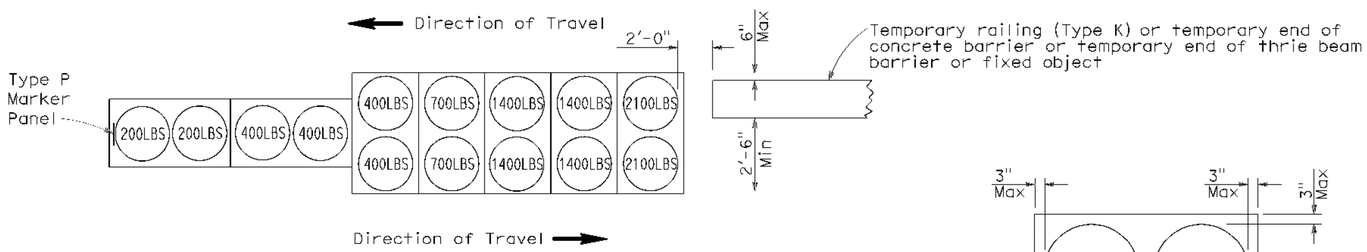
To accompany plans dated 01-11-11



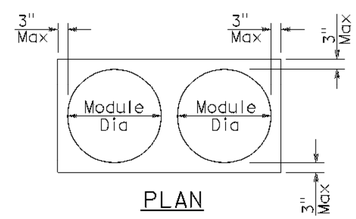
ARRAY 'TB11'

Approach speed less than 45 mph

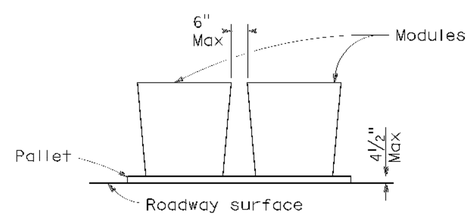


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (BIDIRECTIONAL)

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	19	23

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

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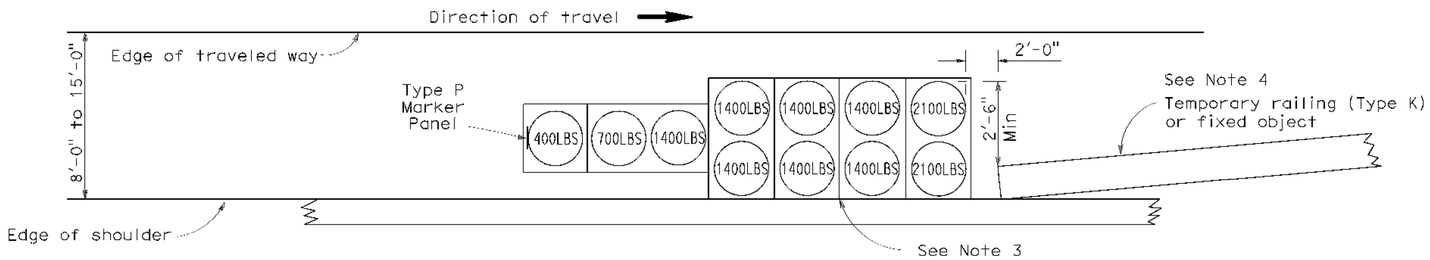
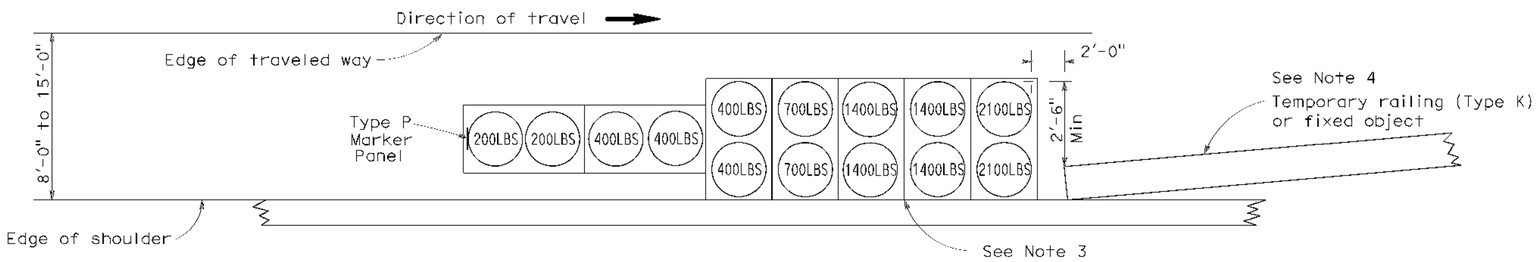
To accompany plans dated 01-11-11



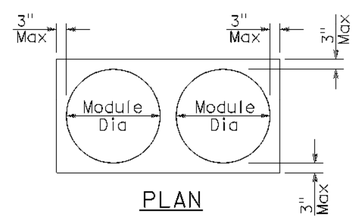
ARRAY 'TS11'

Approach speed less than 45 mph
See Note 9

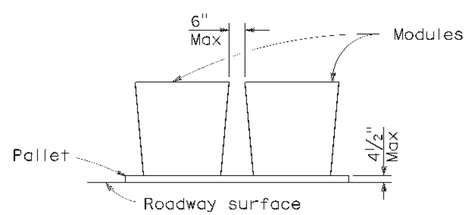


ARRAY 'TS14'

Approach speed 45 mph or more
See Note 9



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 11

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
4. If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
5. Temporary crash cushion arrays shall not encroach on the traveled way.
6. Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
7. Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
8. Refer to Standard Plan A73B for marker details.
9. For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
10. Approach speeds indicated conform to NCHRP 350 Report criteria.
11. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY CRASH CUSHION, SAND FILLED (SHOULDER INSTALLATIONS)

NO SCALE

RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

2006 REVISED STANDARD PLAN RSP T2

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	20	23

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Jeffery G. McRae No. E14512 Exp. 6-30-08 ELECTRICAL STATE OF CALIFORNIA

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To accompany plans dated 01-11-11

ELECTROLIERS

STANDARD TYPES
15, 15D
15 STRUCTURE
21, 21D STRUCTURE
30
31
32
35
36-20A

High mast light pole

Double Arm lighting standard

Existing electrolier

Electrolier foundation (Future installation)

NOTES:

1. Luminaires shall be 310 W HPS when installed on Type 21, 21D, 30, 31, 32, 35 and 36-20A Standards, unless otherwise specified. Luminaires shall be 200 W HPS when installed on other type standards or poles, unless otherwise specified.
2. Luminaires shall be the cutoff type, ANSI Type III medium cutoff lighting distribution, unless otherwise specified.
3. Variations noted adjacent to symbol on project plans.

Electrolier (see project notes or project plans)

Luminaire on wood pole

STANDARD NOTES:

- AB — Abandon. If applied to conduit, remove conductors.
- BC — Install pull box in existing conduit run.
- BP — Pedestrian barricade, type as indicated on plan.
- CB — Install conduit into existing pull box.
- CC — Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF — Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH — Detector handhole.
- FA — Foundation to be abandoned.
- IS — Install sign on signal mast arm.
- NS — No slip base on standard.
- PEC — Photoelectric control.
- PEU — Photoelectric unit.
- RC — Equipment or material to be removed and become the property of the Contractor.
- RE — Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL — Relocate equipment.
- RR — Remove and reuse equipment.
- RS — Remove and salvage equipment.
- SC — Splice new to existing conductors.
- SD — Service disconnect.
- SF — Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP — Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED	EXISTING	
BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	
MAS-4C	mas-4C	
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

SOFFIT AND WALL MOUNTED LUMINAIRES

Pendant, 70 W HPS unless otherwise specified.

Flush, 70 W HPS unless otherwise specified.

Wall surface, 70 W HPS unless otherwise specified.

Existing soffit or wall luminaire to remain unmodified.

Existing soffit or wall luminaire to be modified as specified.

NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	21	23

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Jeffery G. McRae No. E14512 Exp. 6-30-08 ELECTRICAL STATE OF CALIFORNIA

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To accompany plans dated 01-11-11

CONDUIT

PROPOSED	EXISTING	
		Lighting Conduit, unless otherwise indicated or noted
		Traffic signal conduit
C	c	Communication conduit
T	t	Telephone conduit
F	f	Fire alarm conduit
FO	fo	Fiber optic conduit
		Conduit termination (RSP ES-9A C)
R	r	Conduit riser in/on structure or service pole

SERVICE EQUIPMENT

PROPOSED	EXISTING	
OH	oh	Overhead lines
U	U	Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
III		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
T	t	Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION

Type of installation

TYPE H SERVICE - 28'-10" ← Pole height above grade

ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
PV	PV	Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign
		Type 33 Standard, Left-turn vehicle signal face and sign
		Standard with luminaire and signal mast arms and attached vehicle signal faces
		Cantilever flashing beacon Type 9 Frame, with a sign unless otherwise specified or indicated
		Type 15-FBS Standard with two vehicle signal face sections with lens, backplate and visor with a sign
R	Y	Flashing beacon. One vehicle signal face section with lens, backplate and visor. "R" indicates red indication, "Y" indicates yellow indication
		Controller assembly. Door indicates front of cabinet

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

1. All signal sections shall be 12" unless shown otherwise.
2. Signal heads shall be provided with backplates unless shown otherwise.
3. Signal indication shall be LED.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

2006 REVISED STANDARD PLAN RSP ES-1B

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	22	23

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Jeffery G. McRae No. E14512 Exp. 6-30-08 ELECTRICAL STATE OF CALIFORNIA

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To accompany plans dated 01-11-11

EQUIPMENT IDENTIFICATION

ILLUMINATED SIGN IDENTIFICATION NUMBER:

Sign No. 12345

10 ISL SCI 1.0

- Sign number - Place on post or structure
- Transformer rating (kVA)
- Lighting control type
- Number and type of fixtures

} Do NOT place on standard or structure

ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:

12345 - 15'-0"

- Mast arm length, if shown. Do not place on standard or structure.
- Equipment number - Place on standard or structure. Existing equipment numbers are shown in parenthesis

CONDUIT AND CONDUCTOR IDENTIFICATION:

1½"C, 2#10, 15#14, 2 DLC

- Number and size of conductors and cables
- Size of conduit in inches

ø1, ø2, ø2P, etc. — Traffic phase identification for signal faces, detectors and phase diagrams

1 2 3 — Project note numbers

A B C — Equipment description, installation or item numbers

1 2 3 — Conduit run numbers

SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):

19A - 3 - 100

- Wind velocity = 100 mph
- Case 3 arm loading
- Standard type
- Standard Plan sheet number
- Detail number or letter

MISCELLANEOUS EQUIPMENT

PROPOSED	EXISTING	
CMS	cms	Changeable message sign
		Closed circuit television camera
		Highway advisory radio pole and antenna
EMS	ems	Extinguishable message sign
M V	m v	Detection device M = Microwave sensor V = Video image sensor

WIRING DIAGRAM LEGEND

P	Pole
CB	Circuit breaker
A	Ampere
V	Volt
M	Metered
UM	Unmetered
NB	Neutral bus
GB	Ground bus
G	Equipment grounding conductor
N	Grounded conductor (Neutral)

- External conductor
- Conductor or bus
- Tie point
- Contactor coil
- Contactor, Contact NO
- Terminal blocks
- Contactor, Contact NC
- Enclosure bond
- Grounding electrode
- Circuit breaker
- Receptacle

PULL BOXES

PROPOSED EXISTING

Pull box-No. 5 unless otherwise indicated or noted.

3 — 9A(21)

Pull box-Additional designations or descriptions

- 3 = No. 3½ pull box
- 5 = No. 5 pull box
- 6 = No. 6 pull box
- 7 = No. 7 (Ceiling pull box)
- 8 = No. 8 (Pendant soffit pull box)
- 9 = No. 9 pull box
- 9A = No. 9A pull box

- (C) = Communications pull box
- (E) = Pull box with extension
- (S) = Sprinkler control pull box
- (21) = Anchor bolts and conduit for future installation of Type 21 Standard
- (T) = Traffic pull box

VEHICLE DETECTORS

5 J 9 U

- Vehicle detector designation
- U = Upper, L = Lower
- Slot number in input file
- Input file (I or J)
- Phase

PROPOSED	EXISTING	
		Type A detector loop. Outline of sawcut shown.
		Type B detector loop. Outline of sawcut shown.
		Type C detector loop. Outline of sawcut shown.
		Type D detector loop. Outline of sawcut shown.
		Type E detector loop. Outline of sawcut shown.
		Type Q detector loop. Outline of sawcut shown.
		Magnetic detector
DH	dh	Detector handhole
		Microwave or video detection zone

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1C

2006 REVISED STANDARD PLAN RSP ES-1C

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DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
02	Sha	5	R19.0/R28.2	23	23

REGISTERED ELECTRICAL ENGINEER

October 5, 2007
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Jeffery G. McRae No. E14512 Exp. 6-30-08 ELECTRICAL STATE OF CALIFORNIA

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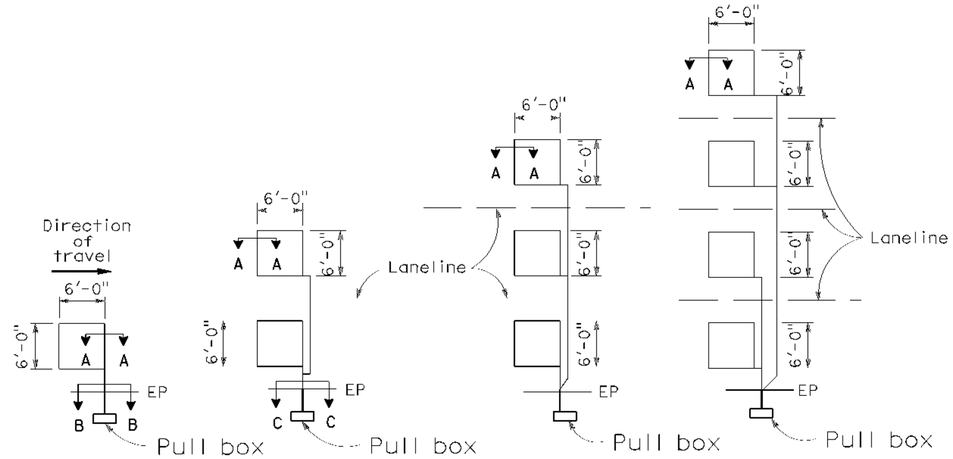
To accompany plans dated 01-11-11

LOOP INSTALLATION PROCEDURE

1. Loops shall be centered in lanes.
2. Saw slots in pavement for loop conductors as shown in details.
3. Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
4. Bottom of saw slot shall be smooth with no sharp edges.
5. Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
6. Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
7. Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
8. Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
9. No more than 2 twisted pairs shall be installed in one sawed slot.
10. Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
11. The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
12. Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
13. Fill slots as shown in details.
14. Splice loop conductors to lead-in-cable. Splices shall be soldered.
15. End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
16. Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
17. Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
18. Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.

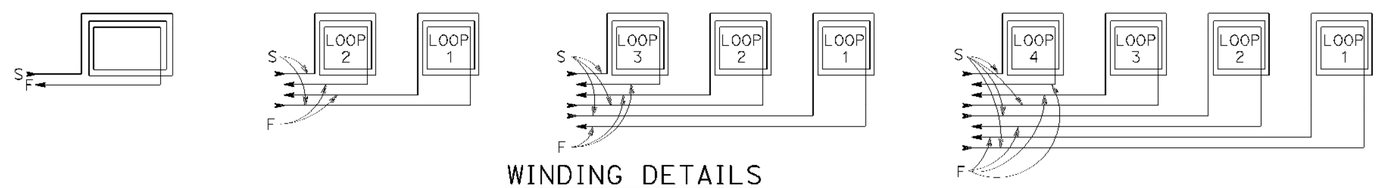


TYPE 1A INSTALLATION | TYPE 2A INSTALLATION | TYPE 3A INSTALLATION | TYPE 4A INSTALLATION

SAWCUT DETAILS

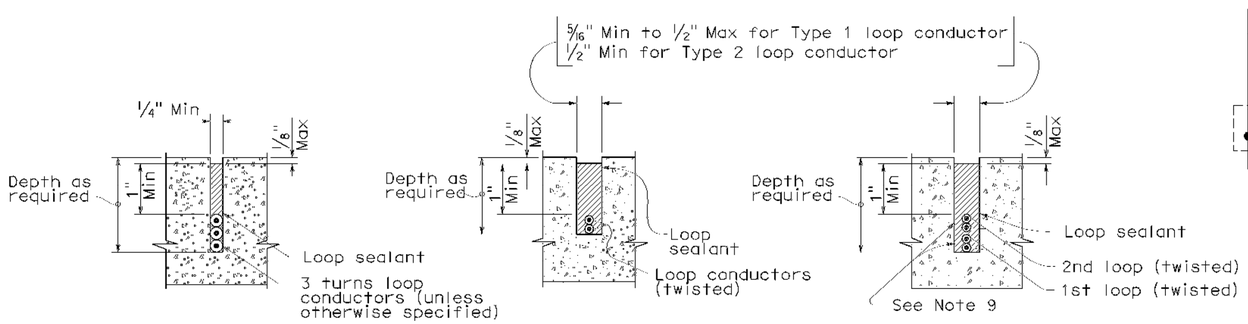
(Type A loop detector configurations illustrated)

1. 1A thru 4A = 1 Type A loop configuration in each lane.
2. 1B thru 4B = 1 Type B loop configuration in each lane.
3. 1C = 1 Type C loop configuration entering lanes as required.
4. 1D thru 4D = 1 Type D loop configuration in each lane.
5. 1E thru 4E = 1 Type E loop configuration in each lane.
6. 1Q thru 4Q = 1 Type Q loop configuration in each lane.
   (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)



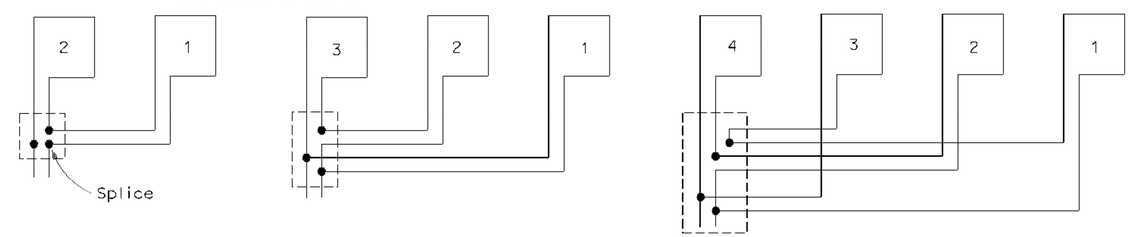
WINDING DETAILS

See Notes 6 and 7



SECTION A-A | SECTION B-B | SECTION C-C

SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (DETECTORS)

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

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